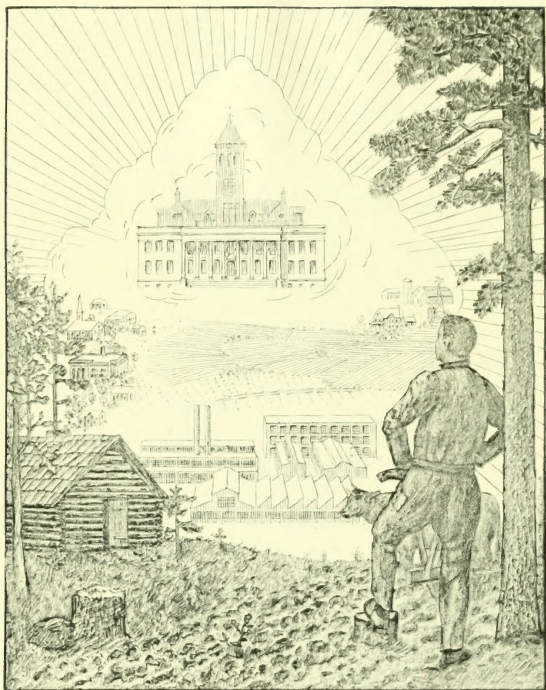


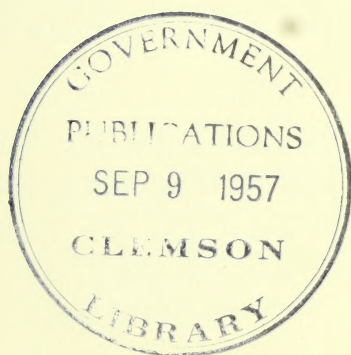
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BUREAU OF RECLAMATION
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BUREAU OF RECLAMATION PROJECT FEASIBILITIES AND AUTHORIZATIONS

A COMPILATION OF FINDINGS OF
FEASIBILITIES AND AUTHORIZATIONS
FOR BUREAU OF RECLAMATION
PROJECTS OF THE DEPARTMENT
OF THE INTERIOR

1957 *Edition*



UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON: 1957

For sale by the Superintendent of Documents, U. S. Government Printing Office,
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Denver, Colorado, Attention: 841.

Price \$3.75

FOREWORD

FINDINGS OF FEASIBILITY AND PROJECT AUTHORIZATIONS

The criterion for authorization of Federal reclamation projects since their inception has been whether they are feasible. At the inauguration of the Federal reclamation program, Congress authorized the Secretary of the Interior to proceed with the construction of an irrigation project if the Secretary determined that the project was practicable and that the estimated cost of construction could be returned to the United States by the water users in not exceeding 10 annual installments.

Under present law (1956) a finding of feasibility approved by the Secretary and sent to the President and the Congress is sufficient to authorize the construction of a reclamation project if the Secretary finds that the proposed project has engineering feasibility and if the estimated cost, less allocations to flood control, navigation, and fish and wildlife, will probably be returned to the United States. Because of this feature, the finding of feasibility procedure is sometimes referred to as the "automatic" authorization. Under the Flood Control Act of 1944, the Secretary is required to inform the Secretary of War (Chief of Engineers) and the affected States of his proposals. If either make objections, the proposal shall require an act of Congress.

The original Reclamation Act of June 17, 1902 (32 Stat. 388), vested in the Secretary authority to construct feasible projects, section 2 of the act providing:

SEC. 2. That the Secretary of the Interior is hereby authorized and directed to make examinations and surveys for, and to locate and construct, as herein provided, irrigation works for the storage, diversion, and development of waters, including artesian wells, and to report to Congress at the beginning of each regular session as to the results of such examination and surveys, giving estimates of cost of all contemplated works, the quantity and location of the lands which can be irrigated therefrom, and all facts relative to the practicability of each irrigation project; also the cost of works in process of construction as well as of those which have been completed.

Section 3 of the act made it discretionary with the Secretary as to whether a project should be undertaken or not, on the basis of whether it was practicable and advisable, the first proviso of this section reading:

SEC. 3. * * * Provided, That all lands entered and entries made under the homestead laws within areas so withdrawn during such withdrawal shall be subject to all the provisions, limitations, charges, terms and conditions of this act; that said surveys shall be prosecuted diligently to completion, and upon the completion thereof, and of the necessary maps, plans, and estimates of cost, the Secretary of the Interior shall determine whether or not

said project is practicable and advisable, and if determined to be impracticable or unadvisable he shall thereupon restore said lands to entry;

Section 4 of the act established the basic rule for feasibility by providing that the Secretary must fix the size of farm to support a family and secure the return of the cost of the construction of the project within ten years, section 4 reading in part, as follows:

SEC. 4. That upon the determination by the Secretary of the Interior that any irrigation project is practicable, he may cause to be let contracts for the construction of the same, in such portions or sections as it may be practicable to construct and complete as parts of the whole project, providing the necessary funds for such portions or sections are available in the reclamation fund, and thereupon he shall give public notice of the lands irrigable under such project, and limit of area per entry, which limit shall represent the acreage which, in the opinion of the Secretary, may be reasonably required for the support of a family upon the lands in question; also of the charges which shall be made per acre upon the said entries, and upon lands in private ownership which may be irrigated by the waters of the said irrigation project, and the number of annual installments, not exceeding ten, in which such charges shall be paid and the time when such payments shall commence. The said charges shall be determined with a view of returning to the reclamation fund the estimated cost of construction of the project, and shall be apportioned equitably; * * *

Thus, we find that under the original act the Secretary had authority to construct those projects which he considered practicable and advisable, the test of financial practicability being limited to whether, in his opinion, the cost of the project could be returned within a ten-year period.

In 1910, by the act of June 25 (36 Stat. 835) Congress modified the finding of feasibility procedure to require the President to approve the authorization for a project on the recommendation of the Secretary of the Interior, section 4 of the act reading:

SEC. 4. That all money placed to the credit of the reclamation fund in pursuance of this act shall be devoted exclusively to the completion of work on reclamation projects heretofore begun as hereinbefore provided, and the same shall be included with all other expenses in future estimates of construction, operation, or maintenance, and hereafter no irrigation project contemplated by said act of June seventeenth, nineteen hundred and two, shall be begun unless and until the same shall have been recommended by the Secretary of the Interior and approved by the direct order of the President of the United States.

This act also contained a special provision requiring all projects then under construction to be examined and reported upon by the Corps of Engineers of the United States Army and the President to reapprove each project as feasible and practicable. Actually, the original authority of the Secretary to find a project feasible was rescinded by the act of 1910 and the President was required to approve all undertakings.

The act of February 21, 1911 (36 Stat. 925), commonly known as the Warren Act, authorized the Secretary to dispose of water in excess of requirements of lands to be irrigated under any project to existing irrigation enterprises. In contracting for the disposition of such excess waters the Secretary is required to fix

the charges, taking into consideration the cost of construction and maintenance of the Government system, and to make the charges just and equitable as to the water users within the Government project. In other words, the Secretary must not discriminate in favor of private lands receiving a supplemental supply under the Warren Act as against the lands receiving a full supply under the government project.

In 1914 the procedure for finding a project feasible was further modified by providing for return of the cost of construction of projects by irrigation water users in 16 installments paid over 20 years. The act of August 13, 1914 (38 Stat. 686), states:

SEC. 1. * * *, any person who hereafter makes entry thereunder shall at the time of making water-right application or entry, as the case may be, pay into the reclamation fund five per centum of the construction charge fixed for his land as an initial installment, and shall pay the balance of said charge in fifteen annual installments, the first five of which shall each be five per centum of the construction charge and the remainder shall each be seven per centum until the whole amount shall have been paid. The first of the annual installments shall become due and payable on December first of the fifth calendar year after the initial installment;

Until 1922 the Government looked to the individual water user on reclamation projects to return the cost thereof. By the act of May 15, 1922 (42 Stat. 541), the Congress authorized the Secretary of the Interior to contract with irrigation districts in place of the individual water user and to recover the annual charges from the district under a joint liability contract. This act, however, did not modify the rules of feasibility, including the repayment limit which remained at 20 years.

It was becoming increasingly evident, however, that the relatively short period of years for return of the investment was limiting the class of projects that could be undertaken. Many worth-while projects could be constructed if a longer repayment period were authorized. A committee of special advisers appointed by the Secretary of the Interior, known as the Fact Finders, submitted a report in 1924 (Senate Document 92, 68th Congress, 1st Session) which became the basis for an act of Congress modifying the feasibility requirements. The Fact Finders Act was attached to and became a part of the Second Deficiency Act of 1924 (act of December 5, 1924, 43 Stat. 672).

The Fact Finders Act required that the Commissioner of Reclamation join with the Secretary of the Interior in recommending projects to the President for approval. In submitting his recommendations to the President the Secretary was required to include in his report information on water supply, engineering features, cost of construction, land prices, probable cost of development, and find that the cost could be returned to the United States. Instead of the 20-year period for repayment as provided by the Extension Act of 1914, the 1924 Act contained the entirely new idea that construction charges should be paid in annual installments based on the productive power of the land. The formula included in the statute computed the annual construction charge

at five percent of the average gross annual acre income for the ten calendar years preceding the year of payment, or for all years of record if less than ten years' records were available. There was no limit to the number of years that the formula could operate to return the project cost and some projects found feasible under this act had a construction repayment period estimated as exceeding 100 years.

The applicable provisions of this act are:

Provided, That no part of the sums herein appropriated shall be used for the commencement of construction work on any reclamation project which has not been recommended by the Commissioner of Reclamation and the Secretary of the Interior and approved by the President as to its agricultural and engineering feasibility and the reasonableness of its estimated construction cost.

SUBSEC. B. That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

SUBSEC. F. That hereafter all project construction charges shall be made payable in annual installments based on the productive power of the land as provided in this subsection. The installment of the construction charge per irrigable acre payable each year shall be 5 per centum of the average gross annual acre income for the ten calendar years first preceding, or for all years of record if fewer than ten years are available, of the area in cultivation in the division or subdivision thereof of the project in which the land is located, as found by the Secretary annually. The decision of the Secretary as to the amount of any such installment shall be conclusive. These annual payments shall continue until the total construction charge against each unit is paid. The Secretary is authorized upon request to amend any existing contract for a project water right so that it will provide for payment of the construction charge thereunder in accordance with the provisions of this subsection or for the deferment of such construction charges for a period of three years from the approval of this section, or both.

In the act of December 5, 1924, Congress authorized adjustments to be made in the construction charges of various authorized reclamation projects. In the Omnibus Adjustment Act of May 25, 1926 (44 Stat. 636), the Congress approved the recommendation of the Department of the Interior for various adjustments in project costs. The Adjustment Act contained other provisions affecting feasibility of future projects. It repealed the crop repayment formula authorized by the Fact Finders Act and substituted instead a proviso that all future contracts must provide for repayment of the cost of construction within such term of years as the Secretary of the Interior might find necessary, but in no event more than forty years. The 1926 Act did not annul or cancel the contracts executed under the 1924 Act but prohibited the execution of any further contracts of this type.

The applicable feasibility provisions of the 1926 Act are:

SEC. 46. * * *. No water shall be delivered upon the completion of any

new project or new division of a project until a contract or contracts in form approved by the Secretary of the Interior shall have been made with an irrigation district or irrigation districts organized under State law providing for payment by the district or districts of the cost of constructing, operating, and maintaining the works during the time they are in control of the United States, such cost of constructing to be repaid within such terms of years as the Secretary may find to be necessary, in any event not more than forty years from the date of public notice hereinafter referred to, and the execution of said contract or contracts shall have been confirmed by a decree of a court of competent jurisdiction. * * *

A number of repayment contracts were executed under the provisions of the 1926 Act, most of them, however, being on projects authorized or found feasible under earlier acts.

No further action was taken by Congress to modify the feasibility requirements of reclamation law until late in the 1930 decade when it again became evident that the rigid forty-year limitation in the 1926 Act was limiting the initiation of construction of new projects and also did not meet the repayment requirements of projects undertaken under authority of "relief" or PWA projects.

The act of August 4, 1939 (53 Stat. 1187), is the next milestone on the reclamation road of feasibility. An attempt is made in this act to meet the difficulties encountered by farmers in paying their construction charges during a depression period under the fixed schedules established by the 1926 act. The 1939 Act in section 4 provides for a variation in construction charges again in accordance with crop values, under a formula similar to that of the 1924 Act, but limiting the period of repayment to forty years. Section 7 of the act further authorizes the Secretary to negotiate for repayment contracts in excess of forty years but such repayment contracts are limited to existing projects or projects under construction, and in addition must be ratified by Congress.

The 1939 Act modified the rules of feasibility. For the first time it brought into reclamation law the concept that benefits from reclamation projects were more than local in scope, and benefits that were national in character should not be a burden on the beneficiaries of reclamation projects. In other words, certain values assigned to national benefits could be deducted from the cost of a project and only the balance need be recovered through payments from water users and from power revenues. Section 9 (b) of the 1939 Act provides that allocations of cost to flood control and navigation would be nonreimbursible.

An innovation of the 1939 Act for repayment of the cost of irrigation works is found in Section 9 (e) which permits of an indefinite period for return of irrigation costs by water users although contracts may not be executed for more than forty years at any one time. Section 9 (e) contracts are applicable only to works connected with water supply and do not apply to distribution systems. The Secretary can re-execute such contracts at the end of a forty-year period as often as he may wish. All contracts for irrigation distribution systems executed in accordance with the 1939 act are, however, limited to forty years under provisions of Section 9 (d) of the act. In like manner, contracts for the sale

of power and municipal water are limited to forty years with the privilege of the Secretary to renew these contracts from time to time.

An important modification of the 1939 Act was the return to the Secretary from the President of the power to approve a finding of feasibility and thereby authorize construction of a project. The finding of feasibility is required, however, to be submitted by the Secretary to the President and the Congress and it does not become fully effective until such transmittal has been accomplished. As a matter of custom, the finding of feasibility is first submitted to the President and a copy of his acknowledgment which contains an expression of his views, or of the review of the Bureau of the Budget, is attached to the transmittal of the finding to the Congress.

The portions of the act of August 4, 1939, relating to project feasibility are quoted below:

SEC. 7 (a). The Secretary is hereby authorized and directed to investigate the repayment problems of any existing project contract unit in connection with which, in his judgment, a contract under section 3 or 4 of this Act would not be practicable nor provide an economically sound adjustment, and to negotiate a contract which, in his judgment, both would provide fair and equitable treatment of the repayment problems involved and would be in keeping with the general purpose of this Act.

SEC. 7 (b). For any project, division of a project, development unit of a project, or supplemental works on a project, now under construction or for which appropriations have been made, and in connection with which a repayment contract has not been executed, allocations of costs may be made in accordance with the provisions of section 9 of this Act and a repayment contract may be negotiated, in the discretion of the Secretary, (1) pursuant to the authority of subsection (a) of this section or (2) in accordance, as near as may be, with the provisions in subsection 9 (d) or 9 (e) of this Act. * * *

SEC. 7 (c). The Secretary from time to time shall report to the Congress on any proposed contracts negotiated pursuant to the authority of subsection (a) or (b) (1) of this section, and he may execute any such contract on behalf of the United States only after approval thereof has been given by Act of Congress.

SEC. 9 (a). No expenditures for the construction of any new project, new division of a project, or new supplemental works on a project shall be made, nor shall estimates be submitted therefor, by the Secretary until after he has made an investigation thereof and has submitted to the President and to the Congress his report and findings on—

- (1) The engineering feasibility of the proposed construction;
- (2) The estimated cost of the proposed construction;
- (3) The part of the estimated cost which can properly be allocated to irrigation and probably be repaid by the water users;
- (4) The part of the estimated cost which can properly be allocated to power and probably be returned to the United States in net power revenues;
- (5) The part of the estimated cost which can properly be allocated to municipal water supply or other miscellaneous purposes and probably be returned to the United States.

If the proposed construction is found by the Secretary to have engineering

feasibility and if the repayable and returnable allocations to irrigation, power, and municipal water supply or other miscellaneous purposes found by the Secretary to be proper, together with any allocation to flood control or navigation made under subsection (b) of this section, equal the total estimated cost of construction as determined by the Secretary, then the new project, new division of a project, or supplemental works on a project, covered by his findings, shall be deemed authorized and may be undertaken by the Secretary. If all such allocations do not equal said total estimated cost, then said new project, new division, or new supplemental works may be undertaken by the Secretary only after provision therefor has been made by Act of Congress enacted after the Secretary has submitted to the President and the Congress the report and findings involved.

SEC. 9 (b). In connection with any new project, new division of a project, or supplemental works on a project there may be allocated to flood control or navigation the part of said total estimated cost which the Secretary may find to be proper. Items for any such allocations made in connection with projects which may be undertaken pursuant to subsection (a) of this section shall be included in the estimates of appropriations submitted by the Secretary for said projects, and funds for such portions of the projects shall not become available except as directly appropriated or allotted to the Department of the Interior. In connection with the making of such an allocation, the Secretary shall consult with the Chief of Engineers and the Secretary of War, and may perform any of the necessary investigations or studies under a cooperative agreement with the Secretary of War. In the event of such an allocation the Secretary of the Interior shall operate the project for purposes of flood control or navigation, to the extent justified by said allocation therefor.

SEC. 9 (c). The Secretary is authorized to enter into contracts to furnish water for municipal water supply or miscellaneous purposes: Provided, That any such contract either (1) shall require repayment to the United States, over a period of not to exceed forty years from the year in which water is first delivered for the use of the contracting party, with interest not exceeding the rate of $3\frac{1}{2}$ per centum per annum if the Secretary determines an interest charge to be proper, of an appropriate share as determined by the Secretary of that part of the construction costs allocated by him to municipal water supply or other miscellaneous purposes; or (2) shall be for such periods, not to exceed forty years, and at such rates as in the Secretary's judgment will produce revenues at least sufficient to cover an appropriate share of the annual operation and maintenance cost and an appropriate share of such fixed charges as the Secretary deems proper, and shall require the payment of said rates each year in advance of delivery of water for said year. Any sale of electric power or lease of power privileges, made by the Secretary in connection with the operation of any project or division of a project, shall be for such periods, not to exceed forty years, and at such rates as in his judgment will produce power revenues at least sufficient to cover an appropriate share of the annual operation and maintenance cost, interest on an appropriate share of the construction investment at not less than 3 per centum per annum, and such other fixed charges as the Secretary deems proper: * * *

SEC. 9 (d) (2). That the part of the construction costs allocated by the Secretary to irrigation shall be included in a general repayment obligation of the organization; and that the organization may vary its distribution of construction charges in a manner that takes into account the productivity of the various classes of lands and the benefits accruing to the lands by reason of the construction: Provided, that no distribution of construction charges over the lands included in the organization shall in any manner be deemed to relieve the organization or any party or any land therein of the organization's general obligation to the United States.

SEC. 9 (d) (3). That the general repayment obligation of the organiza-

tion shall be spread in annual installments, of the number and amounts fixed by the Secretary, over a period not exceeding forty years, exclusive of any development period fixed under subsection (d) (1) of this section, for any project contract unit, or for any irrigation block, if the project contract unit be divided into two or more irrigation blocks.

SEC. 9 (e). In lieu of entering into a repayment contract pursuant to the provisions of subsection (d) of this section to cover that part of the cost of the construction of works connected with water supply and allocated to irrigation, the Secretary, in his discretion, may enter into either short-or-long-term contracts to furnish water for irrigation purposes. Each such contract shall be for such period, not to exceed forty years, and at such rates as in the Secretary's judgment will produce revenues at least sufficient to cover an appropriate share of the annual operation and maintenance cost and an appropriate share of such fixed charges as the Secretary deems proper, due consideration being given to that part of the cost of construction of works connected with water supply and allocated to irrigation; and shall require payment of said rates each year in advance of delivery of water for said year. In the event such contracts are made for furnishing water for irrigation purposes, the costs of any irrigation water distribution works constructed by the United States in connection with the new project, new division of a project, or supplemental works on a project, shall be covered by a repayment contract entered into pursuant to said subsection (d).

Reclamation law was further modified in 1946 by passage of the act of August 14, wherein provision was made by Congress that costs properly allocable to fish and wildlife benefits need not be repaid by the project beneficiaries. The applicable part of this act reads as follows:

SEC. 1. That the Act of March 10, 1934 (48 Stat. 401), is hereby amended to read as follows:

In order to promote effectual planning, development, maintenance, and coordination of wildlife conservation and rehabilitation in the United States, its Territories and possessions, the Secretary of the Interior, through the Fish and Wildlife Service, is authorized (a) to provide assistance to, and cooperate with, Federal, State, and public or private agencies and organizations in the development, protection, rearing, and stocking of all species of wildlife, resources thereof, and their habitat, in controlling losses of the same from disease or other causes; in minimizing damages from overabundant species, in providing public shooting areas, and in carrying out other measures necessary to effectuate the purposes of this Act; and (b) to make surveys and investigations of the wildlife of the public domain, including lands and waters or interests therein acquired or controlled by any agency of the United States.

SEC. 2. Whenever the waters of any stream or other body of water are authorized to be impounded, diverted, or otherwise controlled for any purpose whatever by any department or agency of the United States, or by any public or private agency under Federal permit, such department or agency of the United States first shall consult with the Fish and Wildlife Service and the head of the agency exercising administration over the wildlife resources of the State wherein the impoundment, diversion, or other control facility is to be constructed with a view to preventing loss of and damage to wildlife resources, and the reports and recommendations of the Secretary of the Interior and of the head of the agency exercising administration over the wildlife resources of the State, based on surveys and investigations conducted by the Fish and Wildlife Service and by the said head of the agency exercising administration over the wildlife resources of the State, for the purpose of determining the possible damage to wildlife resources and of the means and measures that should be adopted to prevent loss of and damage to wildlife resources, shall be made an integral part of any report submitted

by any agency of the Federal Government responsible for engineering surveys and construction of such project.

The cost of planning for and the construction or installation and maintenance of any such means and measures shall be included in and shall constitute an integral part of the costs of such projects: Provided, That, in the case of projects hereafter authorized to be constructed, operated, and maintained in accordance with the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto), the Secretary of the Interior, shall, in addition to allocation to be made under section 9 of the Reclamation Project Act of 1939 (53 Stat. 1187), make findings on the part of the estimated cost of the project which can properly be allocated to the preservation and propagation of fish and wildlife, and costs allocated pursuant to such findings shall not be reimbursable. In the case of construction by a Federal agency, that agency is authorized to transfer, out of appropriations or other funds made available for surveying, engineering, or construction to the Fish and Wildlife Service, such funds as may be necessary to conduct the investigations required by this section to be made by it.

SEC. 3. Whenever the waters of any stream or other body of water are impounded, diverted, or otherwise controlled for any purpose whatever by any department or agency of the United States, adequate provision consistent with the primary purposes of such impoundment, diversion, or other control shall be made for the use thereof, together with any areas of land, or interest therein, acquired or administered in connection therewith, for the conservation, maintenance, and management, of wildlife, resources thereof, and its habitat thereon. In accordance with general plans, covering the use of such waters and other interests for these purposes, approved jointly by the head of the department or agency exercising primary administration thereof, the Secretary of the Interior, and the head of the agency exercising administration over the wildlife resources of the State wherein the waters and areas lie, such waters and other interests shall be made available without cost for administration (a) by such State agency, if the management thereof for the conservation of wildlife relates to other than migratory birds; (b) by the Secretary of the Interior, if the waters and other interests have particular value in carrying out the national migratory bird management program.

During the period 1933 to 1940 Congress appropriated large sums undertaking public works throughout the United States. These sums were appropriated to the Federal Emergency Relief Administration, Public Works Administration and the Works Progress Administration. The acts of Congress appropriating these funds in general provided that the works were to be constructed in accordance with existing law controlling their authorization, and under the direction of the agency responsible for the administration of the existing laws. Reclamation projects were among the public works initiated under the authority vested in the President for the expenditure of relief funds. Such initial authorizations were later ratified by findings of feasibility issued under Reclamation law, or by a specific authorization by Congress. In general, these relief acts in no way modified the feasibility requirements of reclamation law. If anything, they established a further criterion that the particular project should, besides satisfying reclamation law, provide a basis for work relief. In return the project would be entitled to financing on the basis of a grant or loan from a relief appropriation. Reclamation projects initiated under the relief acts were later completed by regular reclamation appropriations made on a fully reimbursable basis.

In addition to authorization of reclamation projects by finding of feasibility, many reclamation projects have been authorized by special acts of Congress. These acts of Congress are too numerous to quote in detail here, but generally they anchor to the requirement of basic reclamation law requiring the cost to be returned by the beneficiaries. The special features of most of these acts have been directed to provisions for repayment that differ somewhat from the standard requirements of reclamation law. These differences usually are in the form of an extension of the repayment period for that portion of the project to be repaid by irrigation water users.

The Boulder Canyon project authorized by the act of December 21, 1928 (45 Stat. 1057), for example, requires payment in full of the entire cost of construction within fifty years, except for a \$25,000,000 allocation to flood control which is, however, to be repaid after the end of the fifty-year repayment for all other project costs.

The Fort Peck Project Act which authorizes the Secretary of the Interior to dispose of power from the Corps of Engineers' Fort Peck project, requires that electric power rates be set to recover the cost of producing and transmitting electric energy, including amortization of the capital investment, over a reasonable period of years. The Flood Control Act of 1944 provided that the Secretary of the Interior transmit and dispose of excess power generated at the other reservoir projects under the control of the War Department.

Another outgrowth of the depression years was the effort of Congress to provide through Reclamation for distressed conditions in the Western Plains and Mountain States affected by the extreme droughts of the mid 1930's. Congress's efforts here were directed to providing for small irrigation projects, usually with only a few thousand acres or less, as contrasted with large developments authorized under the Reclamation Act. In the 1940 Appropriation Act passed May 10, 1939, Congress provided \$5,000,000 for Water Conservation and Utility projects in the Great Plains and arid and semi-arid areas. Also in 1939 Congress passed the Water Conservation and Utilization Project Act of August 11, 1939 (53 Stat. 1418). This act authorized the construction of small projects on the basis of joint findings of feasibility by the Secretary of Agriculture and the Secretary of the Interior and approved by the President. The act provided originally for reimbursable appropriations combined with nonreimbursable participation by the Works Progress Administration and the Civilian Conservation Corps, thereby making projects with a high total cost per acre feasible, provided sufficient relief labor could be made available to hold the reimbursable portion to a reasonable amount. This act ordinarily would have expired with termination of the WPA and CCC at the beginning of World War II. Congress by the act of July 16, 1943, modified the original law to permit the completion of Water Conservation and Utility projects which could show a benefit to the war.

The Flood Control Act of 1944 stated the policy of Congress "to

recognize the interests and rights of the States in determining the development of watersheds within their borders and likewise their interest and rights in water conservation and control". In conformity with this policy it provided a procedure whereby both the Chief of Engineers and the Secretary of the Interior are required to give to the affected State or States, and to each other, information developed by the investigations and opportunity for consultation regarding plans and proposals. In the event that the affected States or the Secretary of War make objections to a proposal, the project shall not be deemed authorized in accordance with the Reclamation Project Act of 1939, as described above, but shall require an Act of Congress. The Flood Control Act of 1944 also provided for construction by the Secretary of the Interior of additional irrigation works in connection with dams and reservoirs operated by the Secretary of War.

Following the depression years prior to World War II and the restrictions on manpower, equipment, and materials during the war, deferment in maintenance of the physical plant of many of the older irrigation projects approached a critical stage. A survey of conditions revealed that many wood structures constructed from 20 to 30 years before were in need of replacement; many concrete and steel structures were badly in need of repair or replacement; and many other items were mandatory to restore the projects to their original operating condition. It was intended from the inception of the program that the costs would be repaid by the water users in installments over a number of years. Public Law No. 335 and an amendment thereto, Public Law No. 451, prescribe procedures for negotiation and approval of repayment contracts in connection with expenditures of rehabilitation and betterment funds.

On August 6, 1956, the "Small Projects Act" was signed authorizing the Secretary to make loans of up to \$5,000,000 to State or local agencies to build or assist in building small reclamation projects under reclamation law.

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GENERAL RECLAMATION
AUTHORIZATIONS

THE RECLAMATION ACT OF 1902

An act appropriating the receipts from the sale and disposal of public lands in certain States and Territories to the construction of irrigation works for the reclamation of arid lands. (Act of June 17, 1902, 32 Stat. 388, Public Law 161, 57th Cong., 1st sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all moneys received from the sale and disposal of public lands in Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington, and Wyoming, beginning with the fiscal year ending June thirtieth, nineteen hundred and one, including the surplus of fees and commissions in excess of allowances to registers and receivers, and excepting the five per centum of the proceeds of the sales of public lands in the above States set aside by law for educational and other purposes, shall be, and the same are hereby, reserved, set aside, and appropriated as a special fund in the Treasury to be known as the "reclamation fund," to be used in the examination and survey for and the construction and maintenance of irrigation works for the storage, diversion, and development of waters for the reclamation of arid and semiarid lands in the said States and Territories, and for the payment of all other expenditures provided for in this Act: *Provided*, That in case the receipts from the sale and disposal of public lands other than those realized from the sale and disposal of lands referred to in this section are insufficient to meet the requirements for the support of agricultural colleges in the several States and Territories, under the Act of August thirtieth, eighteen hundred and ninety, entitled "An Act to apply a portion of the proceeds of the public lands to the more complete endowment and support of the colleges for the benefit of agriculture and the mechanic arts, established under the provisions of an Act of Congress approved July second, eighteen hundred and sixty-two," the deficiency, if any, in the sum necessary for the support of the said colleges shall be provided for from any moneys in the Treasury not otherwise appropriated.

SEC. 2. That the Secretary of the Interior is hereby authorized and directed to make examinations and surveys for, and to locate and construct, as herein provided, irrigation works for the storage, diversion, and development of waters, including artesian wells, and to report to Congress at the beginning of each regular session as to the results of such examinations and surveys, giving estimates of cost of all contemplated works, the quantity and location of the lands which can be irrigated therefrom, and all facts relative to the practicability of each irrigation project; also the cost of works in process of construction as well as of those which have been completed.

SEC. 3. That the Secretary of the Interior shall, before giving

the public notice provided for in section four of this Act, withdraw from public entry the lands required for any irrigation works contemplated under the provisions of this Act, and shall restore to public entry any of the lands so withdrawn when, in his judgment, such lands are not required for the purposes of this Act; and the Secretary of the Interior is hereby authorized, at or immediately prior to the time of beginning the surveys for any contemplated irrigation works, to withdraw from entry, except under the homestead laws, any public lands believed to be susceptible of irrigation from said works: *Provided*, That all lands entered and entries made under the homestead laws within areas so withdrawn during such withdrawal shall be subject to all the provisions, limitations, charges, terms, and conditions of this Act; that said surveys shall be prosecuted diligently to completion, and upon the completion thereof, and of the necessary maps, plans, and estimates of cost, the Secretary of the Interior shall determine whether or not said project is practicable and advisable, and if determined to be impracticable or unadvisable he shall thereupon restore said lands to entry; that public lands which it is proposed to irrigate by means of any contemplated works shall be subject to entry only under the provisions of the homestead laws in tracts of not less than forty nor more than one hundred and sixty acres, and shall be subject to the limitations, charges, terms, and conditions herein provided: *Provided*, That the commutation provisions of the homestead laws shall not apply to entries made under this Act.

SEC. 4. That upon the determination by the Secretary of the Interior that any irrigation project is practicable, he may cause to be let contracts for the construction of the same, in such portions or sections as it may be practicable to construct and complete as parts of the whole project, providing the necessary funds for such portions or sections are available in the reclamation fund, and thereupon he shall give public notice of the lands irrigable under such project, and limit of area per entry, which limit shall represent the acreage which, in the opinion of the Secretary, may be reasonably required for the support of a family upon the lands in question; also of the charges which shall be made per acre upon the said entries, and upon lands in private ownership which may be irrigated by the waters of the said irrigation project, and the number of annual installments, not exceeding ten, in which such charges shall be paid and the time when such payments shall commence. The said charges shall be determined with a view of returning to the reclamation fund the estimated cost of construction of the project, and shall be apportioned equitably: *Provided*, That in all construction work eight hours shall constitute a day's work, and no Mongolian labor shall be employed thereon.

SEC. 5. That the entryman upon lands to be irrigated by such works shall, in addition to compliance with the homestead laws, reclaim at least one-half of the total irrigable area of his entry for agricultural purposes, and before receiving patent for the lands covered by his entry shall pay to the Government the charges apportioned against such tract, as provided in section four. No

right to the use of water for land in private ownership shall be sold for a tract exceeding one hundred and sixty acres to any one landowner, and no such sale shall be made to any landowner unless he be an actual bona fide resident on such land, or occupant thereof residing in the neighborhood of said land, and no such right shall permanently attach until all payments therefor are made. The annual installments shall be paid to the receiver of the local land office of the district in which the land is situated, and a failure to make any two payments when due shall render the entry subject to cancellation, with the forfeiture of all rights under this Act, as well as of any moneys already paid thereon. All moneys received from the above sources shall be paid into the reclamation fund. Registers and receivers shall be allowed the usual commissions on all moneys paid for lands entered under this Act.

SEC. 6. That the Secretary of the Interior is hereby authorized and directed to use the reclamation fund for the operation and maintenance of all reservoirs and irrigation works constructed under the provisions of this Act: *Provided*, That when the payments required by this Act are made for the major portion of the lands irrigated from the waters of any of the works herein provided for, then the management and operation of such irrigation works shall pass to the owners of the lands irrigated thereby, to be maintained at their expense under such form of organization and under such rules and regulations as may be acceptable to the Secretary of the Interior: *Provided*, That the title to and the management and operation of the reservoirs and the works necessary for their protection and operation shall remain in the Government until otherwise provided by Congress.

SEC. 7. That where in carrying out the provisions of this Act it becomes necessary to acquire any rights or property, the Secretary of the Interior is hereby authorized to acquire the same for the United States by purchase or by condemnation under judicial process, and to pay from the reclamation fund the sums which may be needed for that purpose, and it shall be the duty of the Attorney-General of the United States upon every application of the Secretary of the Interior, under this Act, to cause proceedings to be commenced for condemnation within thirty days from the receipt of the application at the Department of Justice.

SEC. 8. That nothing in this Act shall be construed as affecting or intended to affect or to in any way interfere with the laws of any State or Territory relating to the control, appropriation, use, or distribution of water used in irrigation, or any vested right acquired thereunder, and the Secretary of the Interior, in carrying out the provisions of this Act, shall proceed in conformity with such laws, and nothing herein shall in any way affect any right of any State or of the Federal Government or of any landowner, appropriator, or user of water in, to, or from any interstate stream or the waters thereof: *Provided*, That the right to the use of water acquired under the provisions of this Act shall be appurtenant to the land irrigated, and beneficial use shall be the basis, the measure, and the limit of the right.

SEC. 9. That it is hereby declared to be the duty of the Sec-

retary of the Interior in carrying out the provisions of this Act, so far as the same may be practicable and subject to the existence of feasible irrigation projects, to expend the major portion of the funds arising from the sale of public lands within each State and Territory hereinbefore named for the benefit of arid and semiarid lands within the limits of such State or Territory: *Provided*, That the Secretary may temporarily use such portion of said funds for the benefit of arid or semiarid lands in any particular State or Territory hereinbefore named as he may deem advisable, but when so used the excess shall be restored to the fund as soon as practicable, to the end that ultimately, and in any event, within each ten-year period after the passage of this Act, the expenditures for the benefit of the said States and Territories shall be equalized according to the proportions and subject to the conditions as to practicability and feasibility aforesaid.

SEC. 10. That the Secretary of the Interior is hereby authorized to perform any and all acts and to make such rules and regulations as may be necessary and proper for the purpose of carrying the provisions of this Act into full force and effect.

EXTENSION OF RECLAMATION ACT TO TEXAS

An act to extend the Irrigation Act to the State of Texas. (Act of June 12, 1906, 34 Stat. 259, Public Law 225, 59th Cong., 1st sess.)

* * * That the provisions of the Act entitled "An Act appropriating the receipts from the sale and disposal of public lands in certain States and Territories to the construction of irrigation works for the reclamation of arid lands," approved June seventeenth, nineteen hundred and two, be, and the same are hereby, extended so as to include and apply to the State of Texas.

DIRECTOR'S RECOMMENDATIONS

UNITED STATES GEOLOGICAL SURVEY,
March 7, 1903.

The Honorable the SECRETARY OF THE INTERIOR,
Washington, D. C.

SIR: Your attention is respectfully called to the desirability of pushing forward a few reclamation projects under the law of June 17, 1902, and concentrating efforts upon these while the general surveys and examinations authorized by you are being made in the thirteen States and three Territories.

In any considerable irrigation project there are so many in-

tricate problems, such as water supply, storage facilities, comparison of alternative canal lines, selection of the particular lands which it is most feasible to irrigate, etc., that in most cases years of careful study are necessary to a determination of the wisest plans. Then still more time must be given to detailed surveys upon which estimates of cost and detailed plans for construction can be based. The Metropolitan Water Board of Boston spent more than ten years in such studies before deciding upon definite construction. A similar period was required for the preliminary studies, borings, etc., prior to the construction of the Croton dam for the City of New York.

Upon the passage of the reclamation law it was recognized that the public would expect construction to begin at an early day, and that the only way to meet this expectation was to vigorously push investigation on those projects about which sufficient was already known to indicate their feasibility and desirability. This has been done. The difficulty of quickly securing the necessary number of competent engineers has prevented as great progress upon other projects as was desired; but certain projects have been brought to the point where they can be clearly defined and their cost and results approximately estimated.

I therefore recommend for favorable consideration five projects which are nearest the point where contracts can be let, and upon which a decision should be reached, so that steps can be taken toward securing titles to the lands needed for the works, and minor necessities be provided, such as roads or means of access by which machinery can be brought in and contractors and others who desire to prepare bids can examine satisfactorily all of the conditions on the ground.

These projects are as follows:

Wyoming	Sweetwater project
Montana	Milk River project
Nevada	Truckee project
Colorado	Gunnison project
Arizona	Salt River project

FUNDS AVAILABLE

In the First Annual Report of the Reclamation Service is quoted the official statement of the funds available for the year 1901, being \$3,144,821.91; also the estimated amount for 1902, being \$4,600,000; which makes, in round numbers, \$7,700,000; to which it is safe to add \$2,300,000 as the increment since June 30, 1902, making a total of \$10,000,000.

Section 9 of the reclamation law divides the fund into two portions, designated the major portion, which is to be expended eventually in the States or Territories in which it originated, subject to the existence therein of feasible irrigation projects; and the minor portion, which is to be expended in accordance with the judgment of the Secretary of the Interior. In short, there are now what may be termed a fixed fund (major portion) of, say, \$5,100,-

000, the distribution of which among the States and Territories named is not subject to discretion, and a floating fund of \$4,900,000, to be used by the Secretary of the Interior in any of the States and Territories named.

There are available, or will be before contracts can be let, ample funds for the construction of the five works listed above without drawing upon the fixed fund for any State. The public lands are being disposed of very rapidly and it is conservative to estimate that the fund for the current year will at least equal the average for the years 1901 and 1902. On this assumption the following table has been prepared, showing the five projects now in an advanced state of preparation that may be commenced within the present calendar year without any borrowing of funds from one State by another:

State	Total cost of project	Available from fixed funds	Required from floating funds
Wyoming (Sweetwater)-----	\$400,000	\$293,217	\$106,783
Montana (Milk River)-----	1,250,000	592,679	657,321
Nevada (Truckee)-----	1,250,000	18,195	1,231,805
Colorado (Gunnison)-----	1,500,000	481,407	1,018,593
Arizona (Salt River)-----	2,800,000	62,565	2,737,435
Total-----	\$7,720,000	\$1,448,063	\$5,751,937

Estimated amount of floating funds June 30, 1903, \$5,692,943.

¹ [Sic]—Correct total, \$7,200,000.

All of these projects will require two or more years for construction, and it is thus seen that the money is available for pushing them forward as rapidly as engineering and economic considerations will permit.

SWEETWATER PROJECT, WYOMING

This involves the construction of a reservoir in central Wyoming, on Sweetwater River, a tributary of North Platte River. The reservoir is one of several ultimately to be built for the storage of floods and the development of lands in Wyoming and Nebraska.

The particular locality is one examined by Capt. Hiram N. Chittenden, Corps of Engineers, U. S. Army (see H. R. Doc. No. 141, 55th Congress, 2nd session.) The lands immediately adjacent to this reservoir site were withdrawn on August 15, 1892, pending survey. Diamond-drill holes have been sunk at the foundations, showing the character of the rock, and the locality has been surveyed in sufficient detail to enable the preparation of plans and estimates.

The land immediately below the reservoir site is at an altitude of about 6,000 feet, and a considerable portion of it is in private ownership. The portions now belonging to the Government include some areas of excellent land, but there are others rough and uneven or containing sand dunes and alkali flats. There has not been sufficient time to examine this land in detail by 40-acre tracts, but

preliminary examination justifies the belief that several thousand acres can be reclaimed. It is known that farther down the river there are ample lands upon which the water can be utilized to advantage, and these have been withdrawn by segregation dated February 6, 1903.

The estimate of cost of the dam on Sweetwater River is placed at \$400,000. A portion of this cost is made up of land damages, the amount of which can only be estimated. There is no question, however, as to the suitability of this place for reservoir construction, and as the acquisition of the site and the construction of the dam will require two or three years, it is recommended that the construction be authorized, so that steps may immediately be taken to secure the necessary lands to be covered by the reservoir and to let contracts for beginning the work.

MILK RIVER PROJECT, MONTANA

This project contemplates the reclamation of land along Milk River, Montana, by flood waters of that stream and the increasing of the water supply in Milk River by the use of St. Mary Lakes, which now empty into St. Mary River and flow northerly into Canada. By building a low earth dam three-fourths of a mile below the present outlet of the lakes, to a maximum elevation of 50 feet above the bottom of the river, there will be formed a reservoir with a capacity of 250,000 acre-feet. By means of a canal 27.4 miles in length water can be taken from this reservoir to the North Fork of Milk River. The cost of the dam is estimated at \$250,000. The cost of the completed work, including dam and everything necessary to delivery of water to the North Fork of Milk River, is estimated at \$950,000. This canal will discharge 1,200 second-feet into Milk River.

The water, in flowing down Milk River, will pass to the north side of the international boundary and return to the United States, flowing southeasterly to a point near Havre, where it is proposed to construct a canal on the north side of Milk River, at a cost of \$350,000, which will irrigate 100,000 acres of land. The excess water and seepage will continue 65 miles farther, to be diverted by a canal on the south side of Milk River and used upon lands between Malta and Glasgow, the remainder of the water being stored in a depression known as Bowdoin Lake. The estimated cost of a canal to Bowdoin Lake is about \$200,000; of closing the outlet to the lake, \$150,000, and of the main diversion canal around and beyond the lake, \$300,000.

The total cost of this system of water storage in St. Mary Lake, of supplemental storage in Bowdoin Lake, and of canals near Yantic and Malta, has been placed at \$2,000,000, and it has been estimated that 250,000 acres of land can be reclaimed.

Surveys for the dam and diversion canal from St. Mary River to the North Fork of Milk River have been finished, and preliminary surveys have been begun on the lower canals and Bowdoin Lake. These have been carried sufficiently far to demonstrate the

feasibility of the project, but not far enough to furnish complete details of location and size.

The project is in a condition to admit of discussion of the general features, but specifications for the lower storage and diversion system can not be prepared until the end of the field season of 1903.

As an objection to this project it is urged that the water must flow down Milk River through a portion of Canada, and that the Canadians might divert the water before it could reach the United States. It is not believed that this would be done. In any event, the United States has absolute control of the water at St. Mary Lake, and if the Canadians should attempt to divert it, it could be kept within United States territory. This would involve the construction of a canal from the North Fork of Milk River across the South Fork to Cutbank Creek, at a cost of \$900,000, making the total cost from St. Mary River to Cutbank Creek \$1,850,000. Here the water will flow down Marias River, increasing the discharge of that stream. It can then be rediverted at a point near the mouth of Cottonwood Creek, carried out on the north side of Marias River, and dropped into Big Sandy Creek, which flows into Milk River above the proposed canal near Havre. By utilizing this route an additional supply of water can be had from Marias River, and the total cost of this line can be distributed over an area larger than would be reclaimed without the use of this latter canal.

It is recommended that at present \$1,250,000 be set aside for use in constructing the following portions of the St. Mary project:

Canal St. Mary Lake to N. Fork Milk River.....	\$700,000
Canal Milk River to Bowdoin reservoir.....	200,000
Bowdoin reservoir embankments	150,000
Irrigation canal from reservoir.....	200,000
Total	1,250,000

This construction will irrigate about 100,000 acres of land, and it constitutes an integral project, as provided by section 4 of the reclamation law. The remaining structures can be provided for at a later date. The above figures include the estimated actual value of right of way.

TRUCKEE PROJECT, NEVADA

This project for the reclamation of lands in western Nevada involves the construction of reservoirs lying in whole or in part in the State of California; also the diversion of the waters in the lower courses of Truckee and Carson rivers upon the broad area of desert lands adjacent to the lakes or sinks of the Carson and Humboldt.

The key of the situation is in Lake Tahoe, one of the largest mountain lakes in the United States. Here water can be stored at trifling cost provided the vested rights for logging, water power,

etc., can be acquired at reasonable prices. While the storage in Lake Tahoe is inexpensive, the bringing of the water through Truckee River and a highline canal to the irrigable lands involves large expenditures. A number of alternative projects have been examined, most of which are feasible, but costly. It has been concluded that at present it is not desirable to attempt the irrigation of lands by means of a high-line canal from Truckee River, but that it will be more economical to divert water by canals near the lower end of this river.

Surveys and examinations have progressed sufficiently far to demonstrate the practicability of storing water in Lake Tahoe, allowing it to flow down Truckee River and to be diverted at a point near Wadsworth by a canal continuing easterly to the lower end of Carson River. Here a large reservoir can be constructed to hold the surplus or flood waters of Carson River and also those received from Truckee River. From this reservoir canal lines can be built to reach irrigable lands around or near Carson Lake and Sink and can be continued northerly, if desired, into the valley of the Humboldt.

The main or trunk system thus outlined is to be elaborated in the future by the construction of similar storage works in the mountains, on the headwaters of Truckee and Carson rivers. These will be relatively more expensive, but will be needed in the complete development of the water resources. There is a practically unlimited extent of desert land which might be reclaimed, and it will be necessary to utilize not merely the principal reservoirs, but also all of the supplemental means of storing waters.

The estimated cost of constructing the irrigating works at Lake Tahoe is \$50,000. By means of these, as has been said, water can be turned down Truckee River, from which it will be diverted by a dam near Wadsworth, turning the water into a canal 38 miles in length; the total cost of this work, including dam, will be \$750,000.

The flood waters of Carson River and those of Truckee River diverted by this canal will be caught by a cement dam, the estimated cost of which is \$450,000, providing 250,000 acre-feet of storage. The extent of good land to be irrigated by this work is estimated at 140,000 acres. This will be increased by supplemental storage works and other canals, most of which are still under survey, but which will cost, it is estimated, about \$1,500,000; these will provide water for an additional area of 100,000 acres.

It is recommended that the general project as outlined be approved and that the examination of the irrigable lands, reservoirs, etc., be continued, and that steps be taken to procure title to the lands needed by the various reservoirs.

GUNNISON PROJECT, COLORADO

This project involves the construction of a tunnel from Gunnison River, a stream of large flow, to lands in the vicinity of Montrose, Colorado, these lands being partly in public and partly in private ownership.

Gunnison River flows through an extremely narrow, deep canyon, which had never been traversed by man, so far as can be ascertained, until examined by Mr. A. L. Fellows, engineer of the United States Geological Survey. He discovered that it is practicable to divert the river in the canyon, carrying it by a tunnel in solid rock, extending along the river about 2 miles, then turning at a slight angle toward the south and extending through the elevated plateau a distance of about 4 miles. Here the water can be delivered into the open valley above the town of Montrose, and will command a large extent of vacant land on both sides of Uncompahgre River.

The surveys and examinations have progressed to a point where the work is seen to be feasible if the people owning lands in the valley will take steps to secure possession of the principal canals needed as distributaries and will guarantee to the Government the performance of certain obligations. The total area under the proposed distributing system supplied by the tunnel is 171,000 acres. Of this about 150,000 acres can be effectively watered through this system. Of this latter amount a little over one-fourth, or 43,000 acres, is public land. The remainder, or 111,000 acres, is in the hands of individuals. In addition to the 150,000 acres, 6,000 acres can be watered from Uncompahgre River, and 11,000 acres are inaccessible or non-irrigable, being on river bottoms or steep slopes, making the total of 171,000 acres above noted.

The total cost of the tunnel with a capacity of 1,200 second-feet, is estimated at \$1,300,000, or a cost per acre on 150,000 acres of a little over \$9.

In addition to the tunnel furnishing water from Gunnison River it will be necessary for the people concerned to provide a canal system, the total cost of which is estimated at \$1,700,000, making a total cost to them of \$3,000,000, or approximately \$20 per acre supplied with water. The value of the lands is such that this amount can readily be paid in annual installments of \$2 per acre.

At the present time it is recommended that the project as outlined be approved conditional upon the people concerned forming an organization such as that contemplated in section 6 of the reclamation law. If these people will secure options upon the existing canals which are needed as part of the distributing system, and will be willing to give security on their land for carrying out the obligations to the Government, it will be practicable to construct the tunnel and to take up the work leading to the reclamation of the lands both in private and in public ownership. Pending such action the surveys and estimates of the tunnel route can be brought more nearly to completion.

SALT RIVER PROJECT, ARIZONA

This project involves the storage of water in Salt River near the mouth of Tonto Creek. From here the waters will be discharged back into Salt River, flowing down the stream to the vicinity of Phoenix, Ariz., where they will be used in the irriga-

tion of vacant lands mostly in private ownership. A considerable extent of public land has been reserved and can be watered in case all of the supply is not needed for the irrigation of small farms now owned by individuals.

The engineering features in the construction and maintenance of the dam are more favorable than those of any other known project in Arizona, and from this standpoint the project is considered as superior to the San Carlos project, discovered and partly examined under the act of Congress authorizing examinations at the Buttes and other places.

In addition to the reservoir itself it is planned to develop waters by means of wells and pumps to be operated by electric power produced at the reservoir, this work being essentially a part of the irrigation works for the storage, diversion, and development of waters contemplated in the reclamation act.

The total cost of the reservoir and appurtenances, including the power plant, is estimated at \$2,800,000. This will provide water for 200,000 acres. Investigations have gone far enough to show that the project is feasible, and it is recommended that authority be given to acquire, if necessary, the lands needed for the reservoir and to let contracts for the construction of such roads as may be needed to secure access to the reservoir site, to enable the bringing in of machinery and the complete examination of all the conditions leading up to the preparation of detailed specifications for the foundations, superstructure, and appurtenances of the dam.

This project is one of the most important and urgent in the United States, as the population needing the water is on the ground and there is actual suffering and loss of property to the community for want of an adequate supply of water; and the conditions are such that early steps must be taken to perfect the organization contemplated in section 6 of the reclamation law relating to the maintenance and operation of the irrigation works by the owners of the land irrigated thereby. The conditions in Arizona are typical of those which must be made elsewhere, and in considering this project and determining upon rules and regulations, it is necessary to create such precedents as will be desirable for other parts of the United States.

The small landowners of the valley, those having tracts of from 40 acres and less up to 160 acres, have already taken steps to form a water-users' association, in order to be in a position to carry out the letter and spirit of the reclamation law and to deal as a community with the Secretary of the Interior, thus facilitating the work in case the project is authorized.

RECOMMENDATIONS

It is respectfully recommended—

1. That efforts be concentrated upon the following five projects, as far as this can be done without detriment to the examination of other projects in hand, in order that specific contracts can be drawn and submitted for your approval:

Sweetwater project in Wyoming

Milk River project in Montana
Truckee project in Nevada
Gunnison project in Colorado
Salt River project in Arizona

2. That authority be granted in general terms for the taking of steps to secure necessary lands which are now in private ownership and which are needed for the dams, reservoirs, and other irrigation works, and that tentative arrangements be made, if practicable, with owners of such lands in order that the same may be submitted for the approval of the Department. If satisfactory arrangements can not be made with such private owners, it will be necessary to ask for condemnation.

3. That negotiations be taken up with owners of irrigable lands included in the projects mentioned, to determine the character of treatment to be accorded their lands, the details to be submitted for the approval of the Department from time to time.

4. That the projects as outlined be approved, with a view to continuing work thereon in greater detail for the ascertainment of the facts necessary for the preparation of specifications and for the letting of contracts for the construction of the irrigation works.

Very respectfully,

(Signed) CHARLES D. WALCOTT,
Director.

DEPARTMENT OF THE INTERIOR,
March 14, 1903.

The above and foregoing recommendations of the Director of the Geological Survey are hereby approved as made, and that officer is hereby authorized and empowered to proceed in accordance therewith and to take the necessary supplemental action to carry the same into effect.

(Signed) E. A. HITCHCOCK,
Secretary.

SECRETARY'S AUTHORIZATION

DEPARTMENT OF THE INTERIOR,
Washington, March 14, 1903.

THE DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: I am in receipt of your communication of the 7th instant, relative to the following five projects under the Reclamation Act of June 17, 1902:

Wyoming	Sweetwater Project
Montana	Milk River Project
Nevada	Truckee Project
Colorado	Gunnison Project
Arizona	Salt River Project

in which you make the following recommendations:

First: That efforts be concentrated upon said five projects as far as this can be done without detriment to the examination of other projects in hand, in order that specific contracts can be drawn and submitted for my approval.

Second: That authority be granted in general terms for the taking of steps to secure necessary lands which are now in private ownership and which are needed for the dams, reservoirs and other irrigation works, and that tentative arrangements be made, if practicable, with owners of such lands in order that the same may be submitted for the approval of the Department. If satisfactory arrangements can not be made with such private owners it will be necessary to ask for condemnation.

Third: That negotiations be taken up with owners of irrigable lands included in the projects mentioned to determine the character of treatment to be accorded their lands, the details to be submitted for the approval of the Department from time to time.

Fourth: That the projects as outlined be approved with a view to continuing work thereon in greater detail for the ascertainment of the facts necessary for the preparation of specifications and for the letting of contracts for the construction of the irrigation works.

After consideration of said recommendations they are hereby approved as made, and you are hereby authorized and empowered to proceed in accordance therewith and to take the necessary supplemental action to carry the same into effect.

Said communication, with my approval endorsed thereon, is herewith returned to your Bureau, a copy thereof being retained in this Department.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

TOWNSITES AND LEASING OF SURPLUS POWER

An act providing for the withdrawal from public entry of lands needed for townsite purposes in connection with irrigation projects under the reclamation Act of June seventeenth, nineteen hundred and two, and for other purposes. (Act of April 16, 1906, 34 Stat. 116, Public Law 103, 59th Cong., 1st sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the

Secretary of the Interior may withdraw from public entry any lands needed for townsite purposes in connection with irrigation projects under the reclamation Act of June seventeenth, nineteen hundred and two, not exceeding one hundred and sixty acres in each case, and survey and subdivide the same into town lots, with appropriate reservations for public purposes.

SEC. 2. That the lots so surveyed shall be appraised under the direction of the Secretary of the Interior and sold under his direction at not less than their appraised value at public auction to the highest bidders, from time to time, for cash, and the lots offered for sale and not disposed of may afterwards be sold at not less than the appraised value under such regulations as the Secretary of the Interior may prescribe. Reclamation funds may be used to defray the necessary expenses of appraisalment and sale, and the proceeds of such sales shall be covered into the reclamation fund.

SEC. 3. That the public reservations in such townsites shall be improved and maintained by the town authorities at the expense of the town; and upon the organization thereof as municipal corporations the said reservations shall be conveyed to such corporations by the Secretary of the Interior, subject to the condition that they shall be used forever for public purposes.

SEC. 4. That the Secretary of the Interior shall, in accordance with the provisions of the reclamation Act, provide for water rights in amount he may deem necessary for the towns established as herein provided, and may enter into contract with the proper authorities of such towns, and other towns or cities on or in the immediate vicinity of irrigation projects, which shall have a water right from the same source as that of said project for the delivery of such water supply to some convenient point, and for the payment into the reclamation fund of charges for the same to be paid by such towns or cities, which charges shall not be less nor upon terms more favorable than those fixed by the Secretary of the Interior for the irrigation project from which the water is taken.

SEC. 5. That whenever a development of power is necessary for the irrigation of lands under any project undertaken under the said reclamation Act, or an opportunity is afforded for the development of power under any such project, the Secretary of the Interior is authorized to lease for a period not exceeding ten years, giving preference to municipal purposes, any surplus power or power privilege, and the moneys derived from such leases shall be covered into the reclamation fund and be placed to the credit of the project from which such power is derived: *Provided*, That no lease shall be made of such surplus power or power privilege as will impair the efficiency of the irrigation project.

ADVANCES TO RECLAMATION FUND AND REQUIREMENT OF PRESIDENTIAL APPROVAL

An act to authorize advances to the "Reclamation Fund," and for the issue and disposal of certificates of indebtedness in reimbursement therefor, and for other purposes. (Act of June 25, 1910, 36 Stat. 835, Public Law 289, 61st Cong., 2d sess.)

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That to enable the Secretary of the Interior to complete government reclamation projects heretofore begun, the Secretary of the Treasury is authorized, upon request of the Secretary of the Interior, to transfer from time to time to the credit of the reclamation fund created by the act entitled "An act appropriating the receipts from the sale and disposal of public lands in certain States and Territories to the construction of irrigation works for the reclamation of arid lands," approved June seventeenth, nineteen hundred and two, such sum or sums, not exceeding in the aggregate twenty million dollars, as the Secretary of the Interior may deem necessary to complete the said reclamation projects, and such extensions thereof as he may deem proper and necessary to the successful and profitable operation and maintenance thereof or to protect water rights pertaining thereto claimed by the United States, provided the same shall be approved by the President of the United States; and such sum or sums as may be required to comply with the foregoing authority are hereby appropriated out of any money in the Treasury not otherwise appropriated: *Provided*, That the sum hereby authorized to be transferred to the reclamation fund shall be so transferred only as such sums shall be actually needed to meet payments for work performed under existing law: *And provided further*, That all sums so transferred shall be reimbursed to the Treasury from the reclamation fund, as hereinafter provided: *And provided further*, That no part of this appropriation shall be expended upon any existing project until it shall have been examined and reported upon by a board of engineer officers of the army, designated by the President of the United States, and until it shall be approved by the President as feasible and practicable and worthy of such expenditure; nor shall any portion of this appropriation be expended upon any new project.*

SEC. 2. That for the purpose of providing the Treasury with funds for such advances to the reclamation fund, the Secretary of the Treasury is authorized to issue certificates of indebtedness of the United States in such form as he may prescribe and in denominations of fifty dollars, or multiples of that sum; said

certificates to be redeemable at the option of the United States at any time after three years from the date of their issue and to be payable five years after such date, and to bear interest payable semiannually, at not exceeding three per centum per annum; the principal and interest to be payable in gold coin of the United States. The certificates of indebtedness herein authorized may be disposed of by the Secretary of the Treasury at not less than par, under such rules and regulations as he may prescribe, giving all citizens of the United States an equal opportunity to subscribe therefor, but no commission shall be allowed and the aggregate issue of such certificates shall not exceed the amount of all advances made to said reclamation fund, and in no event shall the same exceed the sum of twenty million dollars. The certificates of indebtedness herein authorized shall be exempt from taxes or duties of the United States as well as from taxation in any form by or under state, municipal, or local authority; and a sum not exceeding one-tenth of one per centum of the amount of the certificates of indebtedness issued under this act is hereby appropriated, out of any money in the Treasury not otherwise appropriated, to pay the expense of preparing, advertising, and issuing the same.

SEC. 3. That beginning five years after the date of the first advance to the reclamation fund under this act, fifty per centum of the annual receipts of the reclamation fund shall be paid into the general fund of the Treasury of the United States until payment so made shall equal the aggregate amount of advances made by the Treasury to said reclamation fund, together with interest paid on the certificates of indebtedness issued under this act and any expense incident to preparing, advertising, and issuing the same.

SEC. 4. That all money placed to the credit of the reclamation fund in pursuance of this act shall be devoted exclusively to the completion of work on reclamation projects heretofore begun as hereinbefore provided, and the same shall be included with all other expenses in future estimates of construction, operation, or maintenance, and hereafter no irrigation project contemplated by said act of June seventeenth, nineteen hundred and two, shall be begun unless and until the same shall have been recommended by the Secretary of the Interior and approved by the direct order of the President of the United States.

SEC. 5. That no entry shall be hereafter made and no entryman shall be permitted to go upon lands reserved for irrigation purposes until the Secretary of the Interior shall have established the unit of acreage and fixed the water charges and the date when the water can be applied and made public announcement of the same.

SEC. 6. That section nine of said act of Congress, approved June seventeenth, nineteen hundred and two, entitled "An act appropriating the receipts from the sale and disposal of public lands in certain States and Territories to the construction of irrigation works for the reclamation of arid lands," is hereby repealed.

AUTHORIZATION OF RECLAMATION PROJECTS

[Extract from House Document No. 1262, 61st Cong., 3d sess.]

MESSAGE OF THE PRESIDENT

*January 5, 1911.**To the Senate and House of Representatives:*

The act of Congress approved June 17, 1902 (32 Stats., 388), set apart as a fund for the reclamation of arid lands the moneys received from the sales of public lands in certain of the States and Territories, excepting the 5 percent of the proceeds of such sales therefore set aside by law for educational and other purposes. The receipts into the reclamation fund to June 30, 1909, were \$58,439,408.93, and the estimated total receipts to June 30, 1910, are \$65,714,179.06. The total amount accumulated in the fund to date is estimated at \$69,449,058.76, of which all but \$6,241,058.76 has been allotted to the several projects. On June 30, 1910, the net investment in reclamation works amounted to \$53,781,302.88, of which \$52,945,441.03 had on June 30, 1910, been expended in the following primary projects:

States	Project	Net invest- ment
Arizona	Salt River	\$8,430,959.16
Arizona-California	Colorado River	44,201.97
California	Orland	378,603.11
Arizona-California	Yuma	3,781,355.19
Colorado	Grand Valley	73,110.38
Do	Uncompahgre	4,166,639.04
Idaho	Boise	3,373,292.30
Do	Minidoka	2,900,896.56
Do	Snake River storage	69,142.75
Kansas	Garden City	378,316.07
Montana	Huntley	854,420.36
Do	Milk River	519,387.23
Do	St. Mary	265,874.03
Do	Sun River	599,958.59
Montana-North Dakota	Lower Yellowstone	2,888,899.83
Nebraska-Wyoming	North Platte	4,609,476.50
Nevada	Truckee-Carson	3,975,976.42
New Mexico	Carlsbad	617,665.56
Do	Hondo	346,024.76
Do	Leasburg	193,418.82
New Mexico-Texas	Rio Grande	76,060.58
North Dakota	Buford-Trenton	278,294.40
Do	Williston	528,171.31
Oklahoma	Cimarron	8,873.17
Oregon	Central Oregon	40,133.44
Do	Umatilla	1,155,983.22
Oregon-California	Klamath	1,830,600.39
South Dakota	Belle Fourche	2,313,525.22
Utah	Strawberry Valley	913,177.91
Washington	Okanogan	538,281.41
Do	Yakima	3,416,333.48
Wyoming	Shoshone	3,378,387.87
Total		52,945,441.03

In addition, there had been invested in secondary projects June 30, 1910, \$587,390.71; in town-site development, \$10,955.49; in Indian irrigation, \$198,704.21; and for general expenses, \$38,811.44.

The reclamation act requires the return to the reclamation fund of the estimated cost of construction, and therefore entrymen and private landowners receiving water from such projects are required to contribute their proportion of the cost of construction, operation, and maintenance of the projects wherein their lands are located. The total cash returns to the reclamation fund from water right building charges to June 30, 1910, were \$902,822.25, and from water right operation and maintenance charges, \$249,637.19. In addition, there was to June 30, 1910, an additional revenue of \$2,086,173.73 derived from sales of town lots, sales of water, leases of power, etc., which are under the law credited as a reduction of the cost of the project from which the receipts are derived. On June 30, 1910, the Government was prepared to supply water in reclamation projects to 876,684 acres of land, and the area of lands included in the projects now under construction amounts to over 3,100,000 acres. No new projects have been undertaken since March 4, 1909, the efforts of the Government having been directed toward the completion of the 30 primary projects theretofore undertaken.

The additions to the reclamation fund from the sales of public land, while approximating between six and seven million dollars per annum since 1902, were found to be insufficient for the completion of existing projects with such expedition as the necessities of the settlers and landowners within the projects undertaken seemed to require. I accordingly recommended the issuance of certificates of indebtedness or bonds against the reclamation fund. The act of June 25, 1910 (36 Stats., 935), which authorized the issuance of not exceeding \$20,000,000 of certificates of indebtedness repayable out of the reclamation fund, made the appropriation subject to the conditions that it should be expended upon existing projects and their necessary extensions, and that no part of the same should be expended until after the projects had been examined and reported upon by a board of Army engineer officers of the United States Army and approved by me as feasible, practicable, and worthy. The board of engineers selected spent the summer in field examinations of the projects and has submitted to me its report upon each of the projects heretofore undertaken, together with recommendations as to the allotment of the proceeds of the certificates authorized to be issued. In addition, pursuant to my request, the board has submitted its recommendations for the allotment of that part of the reclamation fund derived from the sales of public lands to supplement the \$20,000,000 loan and to carry on worthy projects not participating in the distribution of the loan.

The report of the board is based not only upon its field examination of the various projects but upon information derived from personal conference with the field officers and employees of the Reclamation Service and data furnished by such officers and em-

ployees. In addition, settlers, landowners, and other parties interested in the projects were given an opportunity to be heard. The feasibility of the projects was considered from an engineering and economic standpoint, the board giving consideration to the character of the projects, whether international, interstate, or intrastate, the relative amounts of public and private lands capable of irrigation, the money already expended, the necessity of completion of the projects in order to secure its return, the existing contracts or agreements with water users' associations and private individuals, and the protection of water rights. The board also points out the importance of certain additional legislation authorizing the sale of surplus stored water and the modification of conditions of payments for water rights on certain projects which will otherwise fail of returning their cost to the reclamation fund. The Secretary of the Interior in his annual report to me has recommended similar legislation.

The board recommended the allotment of the \$20,000,000 provided by the act of June 25, 1910, to the following-named projects:

Salt River, Ariz.....	\$495,000
Yuma, Ariz. and Calif.....	1,200,000
Grand Valley, Colo.....	1,000,000
Uncompahgre, Colo.....	1,500,000
Payette-Boise, Idaho.....	2,000,000
Milk River, Mont.....	1,000,000
North Platte, Wyo. and Nebr.....	2,000,000
Truckee-Carson, Nev.....	1,193,000
Rio Grande, N. Mex., Tex., and Mex.....	4,500,000
Umatilla, Oreg.....	325,000
Klamath, Oreg. and Calif.....	600,000
Strawberry Valley, Utah.....	2,272,000
Sunnyside } Yakima, Wash.....	1,250,000
Tieton.... }	665,000
Total	20,000,000

and that the interest on the loan as provided by said act be charged against the projects on the amounts contributed for their completion.

The recommendation of the board for the tentative allotment of the general reclamation fund among the various projects for the years 1911 to 1914, inclusive, was as follows:

Yuma	\$2,380,462
Grand Valley (conditional)	500,000
Uncompahgre	2,045,000
Minidoka	528,000
Payette-Boise	4,585,435
Huntley	110,000
Milk River	2,950,000
Sun River	3,278,000
Lower Yellowstone (conditional)	578,000
North Platte	2,185,000
Truckee-Carson	1,594,000
Rio Grande	1,855,000
Missouri pumping (conditional)	270,000
Belle Fourche	480,000
Okanogan	13,000
Shoshone	2,000,000
Total	25,351,897

No allotments either from the loan or from the general reclamation fund were recommended for the following projects, except for necessary maintenance and operation: Orland, Calif.; Garden City, Kans.; Kittitas, Wapato, Benton (Yakima project), Wash.; Carlsbad, N. Mex.; Hondo, N. Mex.

The last-named projects are, with the exception of the Kittitas, Wapato, and Benton units of the Yakima project, completed or nearly completed. With respect to the said three units of the Yakima project, the board recommended development of a general system of storage reservoirs for the Yakima Valley, provided Congress authorizes the sale of excess stored water, so that the return of the cost of building of reservoirs may be secured, but did not recommend any allotment of funds for the construction of reservoirs or canals specifically for the said units.

After careful consideration of the report of the Board of Engineers, I approved the same, believing that it sets forth a plan for the distribution of the loan and of the available reclamation fund, that, from an engineering and economic standpoint, will best secure the speedy completion of those projects, which, because of their character, the needs of the settlers, treaty or interstate relations, protection of water rights, and prompt return to the reclamation fund of the moneys invested, should be given the preference in construction and completion over such projects or parts of projects which are more remote and may properly wait until a later date for construction or may secure water through private canals in the event the Government is authorized to dispose of surplus water to the owners of such canals. My approval, however, is subject to the condition that the amounts allotted to the various projects may be adjusted and modified from time to time, as is found necessary for the intelligent and proper prosecution of the work and the advantage of the service. I have authorized the Secretary of the Interior to call upon the Secretary of the Treasury from time to time, as the same are needed, for the funds provided for by the act of June 25, 1910, in accordance with the allotments recommended by the board and approved by me.

Pursuant to the recommendations of the Secretary of the Interior and of the Board of Army Engineers, I earnestly recommend the enactment of a law which will permit of the disposition of any surplus stored water available from reclamation projects to persons, associations, or corporations operating systems for the delivery of water to individual water users for the irrigation of arid lands and the enactment of legislation which will give executive authority for the modification of conditions of payment for water rights on certain of the projects where, by reason of local conditions, the return of the cost of the projects to the reclamation fund will not be secured unless settlers are permitted to make payments on terms or conditions other than those specified in the public notes heretofore issued. In this connection attention is directed to the provisions of Senate bill 6842 now pending. Attention is also directed to the other legislation pertaining to reclamation projects recommended by the Secretary

of the Interior, which legislation would aid in the administration of the reclamation projects.

With the funds now at our disposal and the enactment of the additional legislation suggested, it is hoped that the work upon the several projects for which allotments have been made, may proceed to an early completion and that the settlers and water users upon the projects upon being furnished with water for the irrigation of their lands may be enabled to return to the Treasury the sums expended in the construction of the projects. In accordance with the requirements of section 2 of the reclamation act, the Secretary of the Interior has already transmitted to Congress the ninth annual report of the Reclamation Service, and in order that Congress may be placed in possession of all the information at hand to date with reference to the reclamation projects and the estimated cost of their completion I transmit herewith for its further information a copy of the said report of the Board of Army Engineers.

WM. H. TAFT,
President.

THE WHITE HOUSE, *January 5, 1911.*

REPORT OF THE BOARD

Section I

Washington, D. C., November 28, 1910.

The board of officers of the Corps of Engineers of the United States Army detailed to inspect the various reclamation projects has the honor to submit the following report:

2. The board was convened by Special Orders No. 156, War Department, July 6, 1910, and directed to report to the Secretary of the Interior. The duties of the board, as originally outlined, are contained in the following letter of instructions:

DEPARTMENT OF THE INTERIOR,
Washington, July 21, 1910.

Col. JOHN BIDDLE,
*Corps of Engineers, United States Army,
President Board of Army Engineers on Reclamation Projects,
Washington, D. C.*

SIR: I have the honor to instruct the Board of Army Engineers, constituted under the provisions of an act of Congress, entitled "An act to authorize advances to the reclamation fund * * * and for other purposes," approved June 25, 1910, as follows:

The act itself indicates the scope and functions of the board in the following language: "And provided further, That no part of this appropriation shall be expended upon any existing project until it shall have been examined and reported upon by a board of engineer officers of the Army, designated by the President of the United States, and until it shall be approved by the President as feasible and practicable and worthy of such expenditure; nor shall any portion of this appropriation be expended upon any new project," and is interpreted by me to require such examinations of existing projects and

methods, and of works and layouts on the ground as will enable the board to intelligently judge of the practicability of the project in an engineering sense, and to report facts and opinions deduced therefrom, in sufficient detail, to enable the President to judge finally of the feasibility and worthiness of such project in an economical sense.

The board will, at their meeting in Washington, consider such information, including printed or written projects, maps, and oral statements, as may be obtained by them, and will thereafter report on any projects that in their opinion may be finally reported upon without personally visiting the localities involved.

It will visit as a board, or by subdivisions of the board, any and all projects concerning which the information obtained is inadequate or unconvincing to the board; and in making such personal visits, inspections, and investigations the board, or its subdivisions, will first visit preferably the projects upon which work is most urgently demanded and in the order of urgency, whenever in its opinion the time and expense required in the examination in such order may justify.

Final reports of the board on individual projects should be sent in as soon as practicable after conclusions are arrived at to me, through Gen. Marshall, consulting engineer, who will indorse his views upon each report in forwarding it to me.

The board will determine for itself the projects to be actually visited and the order in which they will examine them with least hindrance and delay to the work of the Reclamation Service and of the War Department.

The members of the board will, when on duty under this detail, be paid their mileage from the reclamation fund. All other necessary expenses will be paid them through the War Department.

Such civilian clerks, qualified as stenographer and typewriter, as may be necessary will be detailed to accompany the board.

This order is in lieu of order approved July 6, 1910, which order is hereby vacated.

Very respectfully,

FRANK PIERCE,
Acting Secretary.

Approved:

WM. H. TAFT,
July 28, 1910.

3. These written instructions were subsequently supplemented by oral instructions to investigate all matters connected with the Reclamation Service necessary to enable the board to report fully as to the conditions and needs of each project; to make recommendations as to the abandonment, continuation, or completion of each project; and as to the allotment of funds for future work, both from the regular reclamation fund and from the \$20,000,000 loan.

4. The board met in Washington, D. C., July 20, 1910, and undertook a general study of the scope and conditions of the various projects as set forth in the printed reports and records of the Reclamation Service, supplemented by oral statements of the director made at the request of the board. As a result of the preliminary studies it was deemed advisable to inspect all of the projects before submitting a report. These inspections were made between July 28 and October 22, 1910, and, with a few exceptions, all of the projects were visited by all members of the board. Public hearings were held on each project.

5. The board was accompanied by the consulting engineer to the Secretary of the Interior and over most of the projects by the Director of the Reclamation Service. In each of the six geographical divisions into which the work is divided the board was also

accompanied by the supervising engineer in charge of the division. The inspection of each project was made under the immediate guidance of the project engineer and his principal assistants. Excellent facilities were furnished by the Reclamation Service, or through it by the citizens living on the projects, which enabled the board to examine thoroughly and quickly all desirable features, including both the engineering structures and lands. The various railroads passing through the projects gave the board every assistance for proceeding rapidly from point to point.

6. In its inspection the board was impressed with the ability of the employees occupying positions of responsibility and desires to record its appreciation of the assistance rendered by them.

7. At the requests of the board there was compiled for each project a memoir containing a history and description of the project and its principal features and pertinent information relative to water supply, lands, costs, and estimates. From these memoirs, supplemented by the annual reports and certain special communications, the statistical data in this report were obtained.

8. Before proceeding to the detailed consideration of each project attention will be invited to certain general features of the work of the Reclamation Service.

9. Twenty-five projects have been undertaken, which involve, including extensions, the irrigation of 3,200,000 acres of arid or semi-arid land, at a cost approximately estimated at \$145,000,000. About \$60,000,000, have been expended to date and about 600,000 acres are now receiving water. Only part of this area has been formally opened, the remainder receiving water from the Reclamation Service on a rental basis or through private canals not yet absorbed in the projects.

The reclamation fund to date aggregates \$65,700,000, which includes \$964,393 received to September 30, 1910, on account of repayment of building charges. The accretions to the reclamation fund during the next four years, as estimated by the Reclamation Service, are as follows:

Year	Sale of public land	Repayments	Total
1911 -----	\$6,000,000	\$1,000,000	\$7,000,000
1912 -----	5,500,000	1,500,000	7,000,000
1913 -----	4,500,000	2,500,000	7,000,000
1914 -----	4,000,000	3,000,000	7,000,000

11. *Structures.*—The engineering structures are, as a whole, well designed and well built. Some of them, as the Pathfinder Dam, the Shoshone Dam, the Roosevelt Dam, and the Gunnison Tunnel, are monuments reflecting great credit on both designer and builder.

12. Some of the high earth dams, such as the Belle Fourche Reservoir Dam, which has a cross section approaching the limit of safety; the Bumping Lake Dam, the material of which is not entirely suitable; and the Lower Deer Flat Reservoir Dam, where the leakage is considerable, should be kept under close observation.

13. In some cases, for example, as the Lower Yellowstone Dam

and the Laguna Dam, it is believed that equally suitable structures could have been constructed at less cost. At one or two places work has been pushed to completion under difficulties due to floods and weather, when reasonable delay would have effected a considerable saving without great detriment to the project.

14. Modern irrigation being a relatively new art in this country, much freedom was allowed local engineers in the design of minor structures. While this was a wise policy in the early stages of this work, it has resulted in some complicated and unnecessarily expensive structures. With the present knowledge of the comparative merits of the different types, it is believed that standard designs of the simplest satisfactory type should be adopted for all minor structures.

15. *Water supply.*—The most uncertain feature of nearly all the projects is the water supply. This is under State control, and in the prosecution of its work the Reclamation Service bears the same relation to the State as a private individual or corporation. In each case the filings have been made under State laws, and in some States special legislation has been enacted to prevent future encroachments on the filings of the Reclamation Service. All of the filings made by the Reclamation Service are, however, subject to the prior filings made by individuals and corporations. Where the water rights have been adjudicated the rights of the United States are well defined, but elsewhere they are uncertain and may prove to be materially different from that assumed.

16. It is recommended that, wherever possible, steps be taken to secure an early adjudication of water rights on all projects where such adjudications have not been made, and that, pending such action, expenditures be kept within the probable rights of the United States.

17. On some projects there is a surplus of stored water, which could be advantageously sold if that course were authorized by law. Legislation with this object in view is now pending in Congress. If the sale of surplus water were authorized, certain proposed extensions to cover private land by means of pumping could well be left to private enterprise.

18. *Land.*—In nearly all projects the land proposed to be irrigated will, with proper cultivation and treatment, bear the construction and operation and maintenance charges. In a few cases the payments will be burdensome. In the Garden City and Missouri River pumping projects it is asserted by the settlers that the cost of pumping is prohibitive, but with better farming methods this condition may be changed.

19. Some complaint was made that the adopted sizes of farm units on public land are too small. These vary from 10 acres on part of the Umatilla project to 40 and 80 acres on most of the others. The size of the farm unit was fixed after consideration of the productiveness of the soil, the climate, and the value of the crops that could be raised, the intention being to limit it to an area sufficient for the support of a family. In a few cases there appeared to be some justification for the complaints, but further experience is desirable before any general changes are made.

20. Several Government demonstration farms are maintained by the Reclamation Service at the expense of the projects on which they are located. As a rule, they are not self-supporting, and though the cost to the settlers is not large they form a cause of discontent. Except when self-supporting and needed to supply vegetables and forage for Government use, it is believed that the maintenance of such farms should be left to the Agricultural Department.

21. *Cost.*—The actual cost of completed work has almost invariably exceeded the original estimates, and in the case of some structures has been two or three times as large. This increase in cost has been the cause of much of the discontent among the settlers. It was partly due to a general increase in the cost of labor and materials, partly to underestimates and an insufficient allowance for contingencies, and partly to the necessity of doing more work than was originally contemplated.

22. *Estimates.*—The estimates of cost for completion adopted by the board are taken from the reports submitted by the supervising engineers, supplemented by estimates furnished by the Director of the Reclamation Service. These estimates are based on the experience gained on work already done. In some cases they are approximate only, and will require modification after further surveys and studies are made.

23. Some increase in estimates may be necessary, due to insufficient allowance for drainage. This is an important feature of the reclamation work, particularly when the farmers are not experienced in the economical use of water. The actual needs of the work in this respect can seldom be foreseen with any definiteness, and in consequence drainage on many of the projects has been left to be developed as the need arises.

24. In only a few of the estimates submitted by the Reclamation Service has any allowance been made for an interest charge. As interest at the rate of 3 per cent must, under certain conditions, be paid on the whole or part of the \$20,000,000 loan authorized by Congress to the reclamation fund, some additions to the estimates on this account will probably be necessary. Assuming that expenditures from this fund are made at a uniform rate during five years, that the repayments to the Treasury are made at a uniform rate during the following five years, and that interest must be paid for the entire period, the total interest charge would be equivalent to 3 per cent on \$10,000,000 for 10 years, or \$3,000,000. As it has not yet been determined whether this interest charge is to be spread over all the projects or parts of projects upon which the building charge has not yet been announced, or whether it is to be confined to projects upon which the loan is used, it is impracticable to state its effect on any particular project. It is believed, however, that the result of this added charge, whichever method is adopted, will not be sufficient to adversely affect the feasibility of any of the projects from an economic standpoint.

25. *Returns to the reclamation fund.*—The reclamation act contemplates the return to the fund of the estimated cost of the different projects and the work has been prosecuted on that basis. The estimated cost is held by the Reclamation Service to be that

officially announced by the Secretary of the Interior when the project is opened, and not the preliminary estimates made when the project was undertaken, as was assumed by many of the owners of private lands within the projects. On the assumption that the announced building charge is the estimated cost contemplated by the act, the losses to the reclamation fund, except on four of the projects, which will be referred to hereafter, will be relatively small, though, by reason of the number and large size of some of the projects undertaken, the repayments will extend over many years. If, on the other hand, the term "estimated cost," as use in the act, should hereafter be judicially determined to mean the preliminary estimate made when the project was undertaken, very large losses to the fund will occur.

26. In many of the projects the announced building charge on certain units has been less than the actual cost, but it is expected to compensate for these losses by making the building charge on remaining units correspondingly larger than the actual cost. In the case of public lands such adjustments can undoubtedly be made, but in the case of private lands it is questionable whether they can be required to pay any more than the proper proportion of the actual cost of the work pertaining to the unit in which the lands are situated. If this be true, the probable losses to the fund will be considerably greater than is indicated in the detailed reports.

27. On nearly all of the projects the Reclamation Service deals with the landowner through a water users' association. This is an incorporated body, in which each member holds as many shares of stock as he has acres of irrigable land within the project. In most of the associations the par value of the stock was fixed at what was apparently the originally estimated construction charge per acre. The land covered by the stock subscriptions of its members is bound by means of a contract between the association and the Reclamation Service.

28. The associations being formed in different States, vary in character and the contracts are not all alike. In most of them, however, it is provided that upon the formal opening of the project each holder of stock shall make a water-right application. If he does so, his land becomes bound for the repayment of the announced building charge. If he fails to do so, he can be dropped from the association and the lien foreclosed, but the liability in this case is apparently limited to the par value of the stock.

29. As the probable construction charges on many uncompleted projects will exceed the par value of the stock of the Water Users' Association, due regard for the security of the investment requires that the par value of the stock be correspondingly increased or other means taken that will accomplish the same purpose.

30. A positive loss will occur on the lower Yellowstone project even under the most favorable conditions of completion, and in the Missouri River and Garden City pumping projects and in the Hondo project large losses appear to be inevitable.

31. Under existing regulations the construction charges must be returned to the reclamation fund in 10 equal annual payments. This is regarded as a hardship by the settlers on some projects,

who expressed a desire for a series of graduated construction payments increasing from 1 or 2 percent the first year to 14 or 15 per cent the tenth year. Should this suggestion be generally adopted, it would mean a delay of several years in the return of the first half of the investment and a corresponding delay in the completion of other work.

32. On some of the projects in the semiarid regions such a modification in the terms of payment may be necessary to prevent an absolute failure of the project, but the general adoption of a system of graduated payments is not believed to be necessary or advisable.

33. *Ownership of land.*—Table No. 1¹ shows the amounts of public, State, and private land under the various projects. By public land is meant land in Government ownership, which has been or can be filed on subject to the terms of the reclamation act. In some cases land was entered shortly before withdrawal of adjoining land under the expectation that the project would be undertaken. The title in these cases did not become vested in the homesteader until several years after work on the project had been started, and in a sense such lands were quasi public. At that time, however, as the owners were under no obligation to enter the project and as they could not be compelled to reduce their holdings below the acreage specified for private lands, the lands so held were essentially in private ownership and have been so classed. It is stated by the Director of the Reclamation Service that the area of land so entered is not large.

34. State lands included within a project are not, as a rule, bound to repay the construction charge. In many cases, however, the State has agreed to dispose of its land in tracts of the size adopted for the farm units with the provision that the purchaser shall apply for water and assume the building charge. There is no method of enforcing the sale of such lands nor any assurance that they will be sold within a given time. In some instances, delays of this character may adversely affect water rights and delay or reduce anticipated returns to the reclamation fund. Closer cooperation between the State and the Nation seems desirable.

35. In forming its opinion as to the merits of the different projects, the board has been guided by the following general considerations:

(1) Feasibility from an engineering and an economic standpoint.

(2) Character from a geographic standpoint, whether international, interstate, or intrastate.

(3) The relative amount of public land entered or subject to entry under the reclamation act.

(4) The amount of money already expended and the necessity of completion in order to insure its return, regardless of the second and third considerations.

(5) The protection of water rights pertaining to desirable ex-

¹ Excluded from this publication.

tensions as contemplated by the act of Congress authorizing advances to the reclamation fund.

(6) The existence of agreements with water users' associations, private individuals, and corporations.

36. In making the amount of public land one of these considerations the board is actuated by the belief that the primary object of the reclamation act was the reclamation of public land with incidental benefits to such adjoining private land as must, in nearly all cases, be included in the project in order to make it feasible from an economic or an engineering standpoint.

37. While the community as a whole will profit by the reclamation of private lands, the greater portion of the benefits resulting from such expenditures of Government funds accrues to the original owners, and this without any investment on their part. For instance, in the Tieton unit of the Yakima project, which involves only 6 per cent of public land, the inauguration of the project increased the value of private holdings from a merely nominal sum to about \$150 per acre. These private holdings, some of which were large, are being divided up and sold to settlers, who will be required to pay the construction charge of \$93 in addition to the above price.

38. In undertaking projects where the direct Federal interests are small it would seem no more than equitable to add an interest charge to the cost of reclaiming private land or to require that a percentage of the private holdings be deeded free of cost to the United States, the areas so deeded to be subsequently thrown open to entry under the homestead law as modified by the reclamation act.

39. A description² of the various projects containing the recommendations of the board follows. It is supplemented by Table No. 2,² giving the total estimated cost of each project, the allotments to date, and the suggested allotments.

Respectfully submitted.

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W. C. LANGFITT,

Lieutenant Colonel, Corps of Engineers.

WM. W. HARTS,

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C. W. KUTZ,

Major, Corps of Engineers.

H. BURGESS,

Major, Corps of Engineers.

THE SECRETARY OF THE INTERIOR,

(Through Consulting Engineer to the Secretary of the Interior).

² Excluded from this publication.

WARREN ACT

DISPOSITION OF SURPLUS WATERS AND COOPERATION IN
CONSTRUCTION

An act to authorize the government to contract for impounding, storing, and carriage of water, and to cooperate in the construction and use of reservoirs and canals under Reclamation projects, and for other purposes. (Act of February 21, 1911, 36 Stat. 925, Public Law 406, 61st Cong., 3d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That whenever in carrying out the provisions of the reclamation law, storage or carrying capacity has been or may be provided in excess of the requirements of the lands to be irrigated under any project, the Secretary of the Interior, preserving a first right to lands and entrymen under the project, is hereby authorized, upon such terms as he may determine to be just and equitable, to contract for the impounding, storage, and carriage of water to an extent not exceeding such excess capacity with irrigation systems operating under the act of August eighteenth, eighteen hundred and ninety-four, known as the Carey Act, and individuals, corporations, associations, and irrigation districts organized for or engaged in furnishing or in distributing water for irrigation. Water so impounded, stored, or carried under any such contract shall be for the purpose of distribution to individual water users by the party with whom the contract is made: *Provided, however,* That water so impounded, stored, or carried shall not be used otherwise than as prescribed by law as to lands held in private ownership within Government reclamation projects. In fixing the charges under any such contract for impounding, storing, or carrying water for any irrigation system, corporation, association, district, or individual, as herein provided, the Secretary shall take into consideration the cost of construction and maintenance of the reservoir by which such water is to be impounded or stored and the canal by which it is to be carried and such charges shall be just and equitable as to water users under the Government project. No irrigation system, district, association, corporation, or individual so contracting shall make any charge for the storage, carriage, or delivery of such water in excess of the charge paid to the United States except to such extent as may be reasonably necessary to cover cost of carriage and delivery of such water through their works.

Sec. 2. That in carrying out the provisions of said reclamation act and acts amendatory thereof or supplementary thereto, the Secretary of the Interior is authorized, upon such terms as may be agreed upon, to cooperate with irrigation districts, water users'

associations, corporations, entrymen, or water users for the construction or use of such reservoirs, canals, or ditches as may be advantageously used by the Government and irrigation districts, water users' associations, corporations, entrymen, or water users for impounding, delivering, and carrying water for irrigation purposes: *Provided*, That the title to and management of the works so constructed shall be subject to the provisions of section six of said act: *Provided further*, That water shall not be furnished from any such reservoir or delivered through any such canal or ditch to any one landowner in excess of an amount sufficient to irrigate one hundred and sixty acres: *Provided*, That nothing contained in this act shall be held or construed as enlarging or attempting to enlarge the right of the United States, under existing law, to control the waters of any stream in any State.

Sec. 3. That the moneys received in pursuance of such contracts shall be covered into the reclamation fund and be available for use under the terms of the reclamation act and the acts amendatory thereof or supplementary thereto.

IRRIGATION DISTRICTS AND FARM LOANS ON FEDERAL IRRIGATION PROJECTS

An act to provide for the application of the reclamation law to irrigation districts. (Act of May 15, 1922, 42 Stat. 541, Public Law 219, 67th Cong.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in carrying out the purposes of the act of June 17, 1902 (Thirty-second Statutes, page 388), and acts amendatory thereof and supplementary thereto, and known as and called the reclamation law, the Secretary of the Interior may enter into contract with any legally organized irrigation district whereby such irrigation district shall agree to pay the moneys required to be paid to the United States, and in such event water-right applications on the part of landowners and entrymen, in the discretion of the Secretary of the Interior, may be dispensed with. In the event of such contract being made with an irrigation district, the Secretary of the Interior, in his discretion, may contract that the payments, both for the construction of irrigation works and for operation and maintenance, on the part of the district shall be made upon such dates as will best conform to the district and taxation laws of the respective States under which such irrigation districts shall be formed, and if he deem it advisable he may contract for such penalties or interest charges in case of delinquency in payments as he may deem proper and consistent with such State laws, notwithstanding the provisions of sections 1, 2, 3, 5, and 6 of the reclamation extension act approved August 13, 1914 (Thirty-eighth Statutes, page 686). The Secretary of the Interior may accept a partial payment of the amount due from any district to the United States, providing such acceptance shall not constitute a waiver of the balance remaining due nor the interest or penalties, if any, accruing upon said balance: *Provided*, That no contract with an irrigation district under this act shall be binding on the United States until the proceedings on the part of the district for the authorization of the execution of the contract with the United States shall have been confirmed by decree of a court of competent jurisdiction, or pending appellate action if ground for appeal be laid.

SEC. 2. That patents and water-right certificates which shall hereafter be issued under the terms of the act entitled "An act providing for patents on reclamation entries, and for other purposes," approved August 9, 1912 (Thirty-seventh Statutes at Large, page 265), for lands lying within any irrigation district with which the United States shall have contracted, by which the irrigation district agrees to make the payment of all charges for the building of irrigation works and for operation and maintenance, shall not reserve to the United States a lien for the payment of such charges; and where such a lien shall have been

reserved in any patent or water-right certificate issued under the said act of Congress, the Secretary of the Interior is hereby empowered to release such lien in such manner and form as may be deemed effective; and the Secretary of the Interior is further empowered to release liens in favor of the United States contained in water-right applications and to assent to the release of liens to secure reimbursement of moneys due to the United States pursuant to water-right applications running in favor of the water users' association and contained in stock subscription contracts to such associations, when the lands covered by such liens shall be subject to assessment and levy for the collection of all moneys due and to become due to the United States by irrigation districts formed pursuant to State law and with which the United States shall have entered into contract therefor: *Provided*, That no such lien so reserved to the United States in any patent or water-right certificate shall be released until the owner of the land covered by the lien shall consent in writing to the assessment, levy, and collection by such irrigation district of taxes against said land for the payment to the United States of the contract obligation: *Provided further*, That before any lien is released under this act the Secretary of the Interior shall file a written report finding that the contracting irrigation district is legally organized under the laws of the State in which its lands are located, with full power to enter into the contract and to collect by assessment and levy against the lands of the district the amount of the contract obligation.

SEC. 3. That upon the execution of any contract between the United States and any irrigation district pursuant to this act the public lands included within such irrigation district, when subject to entry, and entered lands within such irrigation district, for which no final certificates shall have been issued and which may be designated by the Secretary of the Interior in said contract, shall be subject to all the provisions of the act entitled "An act to promote the reclamation of arid lands," approved August 11, 1916: *Provided*, That no map or plan as required by section 3 of the said act need be filed by the irrigation district for approval by the Secretary of the Interior.

That the term "first mortgage," as used in section 12 of the Federal farm loan act, approved July 17, 1916, shall be construed to include mortgages on farm lands under United States reclamation projects, notwithstanding there may be against such lands a reserved or created lien in favor of the United States for construction or other charges as provided in the act of June 17, 1902, and acts amendatory thereof and supplementary thereto, known as the reclamation law: *Provided*, That such lands are otherwise eligible for loans under the Federal farm loan act: *And provided further*, That the amount and date of maturity of such lien shall be given due consideration in fixing the value of such lands for loan purposes.

FACT FINDERS' ACT

[Extract from] An act making appropriations to supply deficiencies in certain appropriations for the fiscal year ending June 30, 1924, * * * and for other purposes. (Act of December 5, 1924, 43 Stat. 672, 701, Public Law 292, 68th Cong., 2d sess.)

* * * * *

SEC. 4. SUBSECTION A. That when used in this section—

(a) The word "Secretary" means the Secretary of the Interior.

(b) The words "reclamation law" mean the Act of June 17, 1902 (Thirty-second Statutes, page 388), and all Acts amendatory thereof or supplementary thereto.

(c) The words "reclamation fund" mean the fund provided by the reclamation law.

(d) The word "project" means a Federal irrigation project authorized by the reclamation law.

(e) The words "division of a project" mean a substantial irrigable area of a project designated as a division by order of the Secretary.

SUBSEC. B. That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost of thereof to the United States.

SUBSEC. C. That the Secretary is hereby authorized, under regulations to be promulgated by him, to require of each applicant including preference right ex-service men for entry to public lands on a project, such qualifications as to industry, experience, character, and capital, as in his opinion are necessary to give reasonable assurance of success by the prospective settler. The Secretary is authorized to appoint boards in part composed of private citizens, to assist in determining such qualifications.

SUBSEC. D. That the irrigable lands of each new project and new division of a project hereinafter approved shall be classified by the Secretary with respect to their power, under a proper agricultural program, to support a family and pay water charges, and the Secretary is authorized to fix different construction charges against different classes of land under the same project for the purpose of equitably apportioning the total construction cost so that all lands may as far as practicable bear the burden of such cost according to their productive value.

SUBSEC. E. That hereafter the Secretary shall as to each irrigable acre of land in each new project, or a new division of a proj-

ect, issue two public notices relating to construction charges. The first public notice shall be issued when the land is ready for settlement and will announce the construction charge per irrigable acre. The second public notice shall be issued when in the opinion of the Secretary the agricultural development of the project shall have advanced sufficiently to warrant the commencement of payment of installments of such construction charge. The second public notice shall fix the date when payments will begin on the construction charge announced by the first public notice, which date shall be not more than five years from the date of the first public notice.

SUBSEC. F. That hereafter all project construction charges shall be made payable in annual installments based on the productive power of the land as provided in this subsection. The installment of the construction charge per irrigable acre payable each year shall be 5 per centum of the average gross annual acre income for the ten calendar years first preceding, or for all years of record if fewer than ten years are available, of the area in cultivation in the division or subdivision thereof of the project in which the land is located, as found by the Secretary annually. The decision of the Secretary as to the amount of any such installment shall be conclusive. These annual payments shall continue until the total construction charge against each unit is paid. The Secretary is authorized upon request to amend any existing contract for a project water right so that it will provide for payment of the construction charge thereunder in accordance with the provisions of this subsection or for the deferment of such construction charges for a period of three years from the approval of this section, or both.

SUBSEC. G. That whenever two-thirds of the irrigable area of any project, or division of a project, shall be covered by water right contracts between the water users and the United States, said project shall be required, as a condition precedent to receiving the benefits of this section to take over, through a legally organized water users' association or irrigation district, of care, operation, and maintenance of all or any part of the project works, subject to such rules and regulations as the Secretary may prescribe, and thereafter the United States, in its relation to said project, shall deal with a water users' association or irrigation district, and when the water users assume control of a project, the operation and maintenance charges for the year then current shall be covered into the construction account to be repaid as part of the construction repayments.

SUBSEC. H. That the penalty of 1 per centum per month against delinquent accounts, provided in section 3 and section 6 of the Act of August 13, 1914 (Thirty-eighth Statutes, page 686), is hereby reduced to one-half of 1 per centum per month, as to all installments which may hereafter become due.

SUBSEC. I. That whenever the water users take over the care, operation, and maintenance of a project, or a division of a project, the total accumulated net profits, as determined by the Secretary, derived from the operation of project power plants, leasing of

project grazing and farm lands, and the sale or use of town sites shall be credited to the construction charge of the project, or a division thereof, and thereafter the net profits from such sources may be used by the water users to be credited annually, first, on account of project construction charge, second, on account of project operation and maintenance charge, and third, as the water users may direct. No distribution to individual water users shall be made out of any such profits before all obligations to the Government shall have been fully paid.

SUBSEC. J. That all moneys or profits as determined by the Secretary heretofore or hereafter derived from the sale or rental of surplus water under the Warren Act of February 21, 1911 (Thirty-sixth Statutes, page 925), or from the connection of a new project with an existing project shall be credited to the project or division of the project to which the construction cost has been charged.

SUBSEC. K. That on each existing project where, in the opinion of the Secretary, it appears that on account of lack of fertility in the soil, an inadequate water supply, or other physical causes, settlers are unable to pay construction costs, or whenever it appears that the cost of any reclamation project by reason of error or mistake or for any cause has been apportioned or charged upon a smaller area of land than the total area of land under said project, the Secretary is authorized to undertake a comprehensive and detailed survey to ascertain all pertinent facts, and report in each case the result of such survey to the Congress, with his recommendations: *Provided*, That the cost and expense of each such survey shall be charged to the appropriation for the project on account of which the same is made, but shall not be charged as a part of the construction or operation and maintenance cost payable by the water users under the project.

SUBSEC. L. That in any adjustment of water charges as provided in this section all due and unpaid charges to the United States, both on account of construction and on account of operation and maintenance, including interest and penalties, shall be added in each case to the total obligation of the water user, and the new total thus established shall then be the construction charge against the land in question.

SUBSEC. M. That every entryman or assignee on a project farm unit not yet patented which unit shall be found by the Secretary to be insufficient to support a family and pay water charges shall have the right upon application to exchange his entry for another farm unit of unentered public land on the same or another project located in the same State, in which event all installments of construction charges theretofore paid on account of the relinquished farm unit shall be credited on account of the new farm unit taken in exchange: *Provided*, That where two entrymen apply for the same farm unit under the exchange provision of this subsection, only one of whom is an ex-service man, as defined by the joint resolution of January 21, 1922 (Forty-second Statutes, page 358), the ex-service man shall have a preference in making such exchange.

SUBSEC. N. That all contracts providing for new projects and new divisions of projects shall require that all operation and maintenance charge shall be payable in advance. In each case where the care, operation, and maintenance of a project or division of a project are transferred to the water users the contract shall require the payment of operation and maintenance charges in advance. That whenever an adjustment of water charges is made under this section the adjustment contract shall provide that thereafter all operation and maintenance charges shall be payable in advance.

SUBSEC. O. That the cost and expense after June 30, 1925, of the main office at Washington, District of Columbia, of the Bureau of Reclamation in the Department of the Interior, and the cost and expense of general investigations heretofore and hereafter authorized by the Secretary, shall be charged to the general reclamation fund and shall not be charged as a part of the construction or operation and maintenance cost payable by the water users under the projects.

SUBSEC. P. That where, in the opinion of the Secretary, a right of way or easement of any kind over public land is required in connection with a project the Secretary may reserve the same to the United States by filing in the General Land Office and in the appropriate local land office copies of an instrument giving a description of the right of way or easement and notice that the same is reserved to the United States for Federal irrigation purposes under this section, in which event entry for such land and the patent issued therefor shall be subject to the right of way or easement so described in such instrument; and reference to each such instrument shall be made in the appropriate tract books and also in the patent.

SUBSEC. Q. That where real property or any interest therein heretofore has been, or hereafter shall be, donated and conveyed to the United States for use in connection with a project, and the Secretary decides not to utilize the donation, he is authorized without charge to reconvey such property or any part thereof to the donating grantor, or to the heirs, successors, or assigns of such grantor.

SUBSEC. R. That there is hereby authorized to be appropriated from the General Treasury, the sum of \$100,000 for investigations to be made by the Secretary through the Bureau of Reclamation to obtain necessary information to determine how arid and semi-arid, swamp, and cut-over timberlands may best be developed.

RECLAMATION PROJECT ACT OF 1939

[Extracts from] An act to provide a feasible and comprehensive plan for the variable payment of construction charges on United States reclamation projects, to protect the investment of the United States in such projects, and for other purposes. (Act of August 4, 1939, 55 Stat. 1187, 1192, 1193, 1195, 1196, Public Law 260, 76th Cong., 1st sess.)

SEC. 1. That for the purpose of providing for United States reclamation projects a feasible and comprehensive plan for an economical and equitable treatment of repayment problems and for variable payments of construction charges which can be met regularly and fully from year to year during periods of decline in agricultural income and unsatisfactory conditions of agriculture as well as during periods of prosperity and good prices for agricultural products, and which will protect adequately the financial interest of the United States in said projects, obligations to pay construction charges may be revised or undertaken pursuant to the provisions of this Act.

* * * * *

SEC. 7 (a). The Secretary is hereby authorized and directed to investigate the repayment problems of any existing project contract unit in connection with which, in his judgment, a contract under section 3 or 4 of this Act would not be practicable nor provide an economically sound adjustment, and to negotiate a contract which, in his judgment, both would provide fair and equitable treatment of the repayment problems involved and would be in keeping with the general purpose of this Act.

SEC. 7 (b). For any project, division of a project, development unit of a project, or supplemental works on a project, now under construction or for which appropriations have been made, and in connection with which a repayment contract has not been executed, allocations of costs may be made in accordance with the provisions of section 9 of this Act and a repayment contract may be negotiated, in the discretion of the Secretary, (1) pursuant to the authority of subsection (a) of this section or (2) in accordance, as near as may be, with the provisions in subsection 9 (d) or 9 (e) of this Act. * * *

SEC. 7 (c). The Secretary from time to time shall report to the Congress on any proposed contracts negotiated pursuant to the authority of subsection (a) or (b) (1) of this section, and he may execute any such contract on behalf of the United States only after approval thereof has been given by Act of Congress.

* * * * *

SEC. 9 (a). No expenditures for the construction of any new

project, new division of a project, or new supplemental works on a project shall be made, nor shall estimates be submitted therefor, by the Secretary until after he has made an investigation thereof and has submitted to the President and to the Congress his report and findings on—

- (1) The engineering feasibility of the proposed construction;
- (2) The estimated cost of the proposed construction;
- (3) The part of the estimated cost which can properly be allocated to irrigation and probably be repaid by the water users;
- (4) The part of the estimated cost which can properly be allocated to power and probably be returned to the United States in net power revenues;
- (5) The part of the estimated cost which can properly be allocated to municipal water supply or other miscellaneous purposes and probably be returned to the United States.

If the proposed construction is found by the Secretary to have engineering feasibility and if the repayable and returnable allocations to irrigation, power, and municipal water supply or other miscellaneous purposes found by the Secretary to be proper, together with any allocation to flood control or navigation made under subsection (b) of this section, equal the total estimated cost of construction as determined by the Secretary, then the new project, new division of a project, or supplemental works on a project, covered by his findings, shall be deemed authorized and may be undertaken by the Secretary. If all such allocations do not equal said total estimated cost, then said new project, new division, or new supplemental works may be undertaken by the Secretary only after provision therefor has been made by Act of Congress enacted after the Secretary has submitted to the President and the Congress the report and findings involved.

SEC. 9 (b). In connection with any new project, new division of a project, or supplemental works on a project there may be allocated to flood control or navigation the part of said total estimated cost which the Secretary may find to be proper. Items for any such allocations made in connection with projects which may be undertaken pursuant to subsection (a) of this section shall be included in the estimates of appropriations submitted by the Secretary for said projects, and funds for such portions of the projects shall not become available except as directly appropriated or allotted to the Department of the Interior. In connection with the making of such an allocation, the Secretary shall consult with the Chief of Engineers and the Secretary of War, and may perform any of the necessary investigations or studies under a cooperative agreement with the Secretary of War. In the event of such an allocation the Secretary of the Interior shall operate the project for purposes of flood control or navigation, to the extent justified by said allocation therefor.

SEC. 9 (c). The Secretary is authorized to enter into contracts to furnish water for municipal water supply or miscellaneous purposes: Provided, That any such contract either (1) shall require repayment to the United States, over a period of not to exceed forty years from the year in which water is first delivered

for the use of the contracting party, with interest not exceeding the rate of $3\frac{1}{2}$ per centum per annum if the Secretary determines an interest charge to be proper, of an appropriate share as determined by the Secretary of that part of the construction costs allocated by him to municipal water supply or other miscellaneous purposes; or (2) shall be for such periods, not to exceed forty years, and at such rates as in the Secretary's judgment will produce revenues at least sufficient to cover an appropriate share of the annual operation and maintenance cost and an appropriate share of such fixed charges as the Secretary deems proper, and shall require the payment of said rates each year in advance of delivery of water for said year. Any sale of electric power or lease of power privileges, made by the Secretary in connection with the operation of any project or division of a project, shall be for such periods, not to exceed forty years, and at such rates as in his judgment will produce power revenues at least sufficient to cover an appropriate share of the annual operation and maintenance cost, interest on an appropriate share of the construction investment at not less than 3 per centum per annum, and such other fixed charges as the Secretary deems proper: * * *

SEC. 9 (d) (2). That the part of the construction costs allocated by the Secretary to irrigation shall be included in a general repayment obligation of the organization; and that the organization may vary its distribution of construction charges in a manner that takes into account the productivity of the various classes of lands and the benefits accruing to the lands by reason of the construction: Provided, that no distribution of construction charges over the lands included in the organization shall in any manner be deemed to relieve the organization or any party or any land therein of the organization's general obligation to the United States.

SEC. 9 (d) (3). That the general repayment obligation of the organization shall be spread in annual installments of the number and amounts fixed by the Secretary, over a period not exceeding forty years, exclusive of any development period fixed under subsection (d) (1) of this section, for any project contract unit, or for any irrigation block, if the project contract unit be divided into two or more irrigation blocks.

SEC. 9 (e). In lieu of entering into a repayment contract pursuant to the provisions of subsection (d) of this section to cover that part of the cost of the construction of works connected with water supply and allocated to irrigation, the Secretary, in his discretion, may enter into either short-or-long-term contracts to furnish water for irrigation purposes. Each such contract shall be for such period, not to exceed forty years, and at such rates as in the Secretary's judgment will produce revenues at least sufficient to cover an appropriate share of the annual operation and maintenance cost and an appropriate share of such fixed charges as the Secretary deems proper, due consideration being given to that part of the cost of construction of works connected with water supply and allocated to irrigation; and shall require payment of said rates each year in advance of delivery of water for said year.

In the event such contracts are made for furnishing water for irrigation purposes, the costs of any irrigation water distribution works constructed by the United States in connection with the new project, new division of a project, or supplemental works on a project, shall be covered by a repayment contract entered into pursuant to said subsection (d).

An act relating to the administration by the Secretary of the Interior of section 9, subsections (d) and (e), of the Reclamation Project Act of 1939. (Act of July 2, 1956, 70 Stat. 483, Public Law 643, 84th Cong., 2nd sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, in administering section 9, subsections (d) and (e) of the Reclamation Project Act of 1939 (53 Stat. 1187, 1195), the Secretary of the Interior shall—

(1) include in any long-term contract hereafter entered into under said subsection (e) provision, if the other contracting party so requests, for renewal thereof under stated terms and conditions mutually agreeable to the parties. Such terms and conditions shall provide for an increase or decrease in the charges set forth in the contract to reflect, among other things, increases or decreases in construction, operation, and maintenance costs and improvement or deterioration in the party's repayment capacity. Any right of renewal shall be exercised within such reasonable time prior to the expiration of the contract as the parties shall have agreed upon and set forth therein;

(2) include in any long-term contract hereafter entered into under said subsection (e) with a contracting organization provision, if the organization so requests, for conversion of said contract, under stated terms and conditions mutually agreeable to the parties, to a contract under subsection (d) at such time as, account being taken of the amount credited to return by the organization as hereinafter provided, the remaining amount of construction cost which is properly assignable for ultimate return by it can probably be repaid to the United States within the term of a contract under said subsection (d) ;

(3) credit each year to every party which has entered into or which shall enter into a long-term contract pursuant to said subsection (e) so much of the amount paid by said party on or before the due date as is in excess of the share of the operation and maintenance costs of the project which the Secretary finds is properly chargeable to that party. Credit for payments heretofore made under any such contract shall be established by the Secretary as soon after the enactment of this Act as it is feasible for him to do so. After the sum of such credits is equal to the amount which would have been for repayment by the party if a repayment contract under subsection (d) had been entered into, which amount shall be established by the Secretary upon com-

pletion of the project concerned or as far in advance thereof as is feasible, no construction component shall be included in any charges made for the furnishing of water to the contracting party and any charges theretofore fixed by contract or otherwise shall be reduced accordingly;

(4) provide that the other party to any contract entered into pursuant to said subsection (d) or to any long-term contract entered into pursuant to said subsection (e) shall, during the term of the contract and of any renewal thereof and subject to fulfillment of all obligations thereunder, have a first right (to which right the rights of the holders of any other type of irrigation water contract shall be subordinate) to a stated share or quantity of the project's available water supply for beneficial use on the irrigable lands within the boundaries of, or owned by, the party and a permanent right to such share or quantity upon completion of payment of the amount assigned for ultimate return by the party subject to payment of an appropriate share of such costs, if any, as may thereafter be incurred by the United States in its operation and maintenance of the project works; and

(5) provide for payment of rates under any contract entered into pursuant to said subsection (e) in advance of delivery of water on an annual or semiannual basis as specified in the contract.

(6) include a reasonable construction component in the rates set out in any long-term contract hereafter entered into under said subsection (e) prior to amortization of that part of the cost of constructing the project which is assigned to be repaid by the contracting party.

SEC. 2. The Secretary is hereby authorized to negotiate amendments to existing contracts entered into pursuant to section 9, subsection (e), of the Reclamation Project Act of 1939 to conform said contracts to the provisions of this Act.

SEC. 3. As used in this Act, the term "long-term contract" shall mean any contract the term of which is more than ten years.

SEC. 4. Nothing in this Act shall be construed as affecting or intended to affect or to in any way interfere with the laws of any State relating to the control, appropriation, use, or distribution of water used in irrigation, or any vested right acquired thereunder, and the Secretary in carrying out the provisions of this Act, shall proceed in conformity with such laws, and nothing herein shall in any way affect any right of any State or of the Federal Government or of any landowner, appropriator, or user of water in, to, or from any interstate stream or the water thereof: *Provided*, That the right to the use of water acquired under the provisions of this Act shall be appurtenant to the land irrigated and beneficial use shall be the basis, the measure, and the limit of the right.

SEC. 5. This Act shall be a supplement to the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto).

WATER CONSERVATION AND UTILITY PROJECTS

GREAT PLAINS PROJECTS

[Extract from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1940, and for other purposes. (Act of May 10, 1939, 53 Stat. 685, 719, Public Law 68, 76th Cong., 1st sess.)

* * * * *

WATER CONSERVATION AND UTILITY PROJECTS

For construction, in addition to labor and materials to be supplied by the Works Progress Administration, of water conservation and utilization projects, including acquisition of water rights, rights-of-way, and other interests in land, in the Great Plains and arid and semiarid areas of the United States, to be immediately available, \$5,000,000, to be allocated by the President, in such amounts as he deems necessary, to such Federal Departments, establishments, and other agencies as he may designate, and to be reimbursed to the United States by the water users on such projects in not to exceed forty annual installments: *Provided*, That expenditures from Works Progress Administration funds shall be subject to such provisions with respect to reimbursability as the President may determine.

WHEELER-CASE PROJECTS

An act authorizing construction of water conservation and utilization projects in the Great Plains and arid and semiarid areas of the United States. (Act of August 11, 1939, 53 Stat. 1418, Public Law 398, 76th Cong., 1st sess.)

* * * That the Secretary of the Interior is hereby authorized to undertake the construction, including acquisition of water rights, rights-of-way, and other interests in land, of water conservation and utilization projects in the Great Plains and arid and semiarid areas of the United States.

SEC. 2. Any moneys expended on such construction from appropriations made under the authority of this Act shall be repaid to the United States by the water users in not to exceed forty annual installments. Any labor or materials supplied for such construction by the Work Projects Administration, the Civilian Con-

servation Corps, or any other Federal agency shall be utilized in such manner as the President may determine, and for such labor and materials the water users shall reimburse the United States in such amounts and on such terms as the President may fix for each project.

SEC. 3. No moneys may be expended on a project pursuant to the authority of this Act unless and until (1) the Secretary of the Interior has found, and has certified to the President, that the project has engineering feasibility and that the moneys to be expended on the project from appropriations made under the authority of this Act probably can be repaid by the water users within forty years; and (2) the President has approved said findings and has determined that labor and materials for the construction of the project should be made available to the Department of the Interior by the Work Projects Administration or a similar Federal agency, in the amount found by the Secretary of the Interior to make up the difference, if any, between the estimated cost of construction and the amount which can be expended from appropriations made under this Act and probably can be repaid by the water users: *Provided*, That the Secretary of the Interior may accept for the construction of the project such labor or materials as may be offered by any State or political subdivision thereof, State agency, or municipal corporation, and may reduce by the amount thereof the estimated cost of construction to be met by the expenditure of Federal moneys.

SEC. 4. There is hereby authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, such sums of money as may be necessary to carry out the provisions of this Act, including investigations and surveys of projects proposed under the authority of this Act; and, from such sums appropriated or transferred, expenditures may be made for personal services in the District of Columbia and may be made for the same purposes and under the same conditions as included in the appropriation Acts for the departments, establishments, and other agencies to which sums may be made available by appropriation or transfer.

[Extracts from] An act to amend an Act entitled "An Act authorizing construction of water conservation and utilization projects in the Great Plains and arid and semiarid areas of the United States," approved August 11, 1939 (53 Stat. 1418), and an Act entitled "An Act to promote conservation in the arid and semiarid areas of the United States by aiding in the development of facilities for water storage and utilization, and for other purposes," approved August 28, 1937 (50 Stat. 869). (Act of October 14, 1940, 54 Stat. 1119, 1121, 1122, 1125, Public Law 848, 76th Cong., 3d sess.)

* * * That the Act entitled "An Act authorizing construction of water conservation and utilization projects in the Great Plains and arid and semiarid areas of the United States," approved August 11, 1939 (53 Stat. 1418), is hereby amended to read as follows:

SECTION 1. For the purpose of stabilizing water supply and thereby rehabilitating farmers on the land and providing opportunities for permanent settlement of farm families, the Secretary of the Interior (hereinafter referred to as "the Secretary") is hereby authorized to investigate and, upon compliance with the provisions of this Act, to construct water conservation and utilization projects in the Great Plains and arid and semiarid areas of the United States, and to operate and maintain each such project in accordance with the provisions of this Act: *Provided*, That the United States shall retain title to the dams, reservoirs, irrigation, and other project works until Congress otherwise provides: *And provided further*, That expenditures from appropriations made directly pursuant to the authority contained in section 12 (1) to meet reimbursable construction costs allocated to irrigation as defined in section 4 (b) shall not exceed \$1,000,000 for dams and reservoirs in any one project.

SEC. 2. In connection with the investigation, construction, or operation and maintenance of a project, pursuant to the authority of this Act, the Secretary is authorized to utilize (1) in such manner as the President may direct, services, labor, materials, or other property, including money, supplied by the Work Projects Administration, the Civilian Conservation Corps, the Office of Indian Affairs, the Department of Agriculture, or any other Federal agency, for which the United States shall be reimbursed in such amounts as the President may fix for each project, within the limits of the water users' ability to repay costs as found by the Secretary under subsection 3 (a) (iv); and (2) such services, labor, materials, easements or property, including money, as may be contributed by any State or political subdivision thereof, State agency, municipal corporation, or other organization, or individuals, if, in the judgment of the Secretary, the acceptance thereof will not impair the title of the United States to the project works and will not reduce the probability that the project water users can meet the obligations to the United States entered into pursuant to this Act. Moneys received and accepted under (2) of this section shall be and remain available for expenditure for the purposes for which contributed in like manner as if said sums had been specifically appropriated for said purposes.

SEC. 3. (a) No construction of a project may be undertaken pursuant to the authority of this Act unless and until the Secretary has made an investigation thereof and has submitted to the President his report and findings on—

- (i) the engineering feasibility of the proposed construction;
- (ii) the estimated cost of the proposed construction;
- (iii) the part of the estimated cost which properly can be allocated to irrigation;
- (iv) the part of the estimated cost which probably can be repaid by the water users in accordance with the requirements of section 4;
- (v) the part of the estimated cost which can properly be allocated to municipal or miscellaneous water supplies or power and probably be returned to the United States in revenues therefrom;
- (vi) the part of the estimated cost which can properly be allocated to the irrigation of Indian trust and tribal lands, and be repayable in accordance with existing law relating to Indian lands;
- (vii) the part of the estimated cost which can properly be allocated to flood control as recommended by the Chief of Engineers, War Department.

In connection with each such investigation, report, and finding, the Secretary shall consult with the Secretary of Agriculture regarding participation in the proposed project by the Department of Agriculture under the authority of sections 5 and 6; and the Secretary shall also transmit to the President a report by the Secretary of Agriculture to the President on the participation, if any, proposed by the Department of Agriculture. The project shall be deemed authorized and may be undertaken pursuant to this Act if (1) the Secretary finds and certifies to the President that the project has engineering feasibility and that the water users probably can repay, in accordance with the requirements of section 4, an amount equal to or in excess of that part of the estimated cost allocated by him to irrigation to be met by expenditure of moneys appropriated pursuant to section 12 (1); and (2) the President has approved said report and findings and has found that services, labor, materials, easements, and other property, including money, for the construction of the project, should be made available to the Department of the Interior

by the Work Projects Administration or other Federal agencies, to the extent found necessary by the Secretary to make up the difference between the estimated cost of project construction and (i) the part thereof to be met by expenditure of moneys appropriated pursuant to section 12 (1), together with (ii) such services, materials, money, easements, and other property as non-Federal agencies or parties have agreed to contribute and the Secretary has found acceptable under section 2. * * *

SEC. 4 (b) The term "reimbursable construction costs" as used in this Act means that part of the costs of investigating, constructing, and operating and maintaining the project, which are allocated by the Secretary to irrigation, and which are met by expenditures of moneys therefor appropriated under the authority of section 12 (1), plus such amounts as the President, under section 2 (1), may determine to be reimbursable: *Provided*, That administrative expenses incurred in the District of Columbia in connection with the investigation, construction, or operation and maintenance of a project shall not be included in the reimbursable construction costs nor shall they be charged to the water users in any way. * * *

SEC. 5. (a) In connection with the construction or operation and maintenance of projects undertaken pursuant to the authority of this Act, and in order to further in the Great Plains and arid and semiarid areas of the United States an effective rehabilitation program, stabilization of the agricultural economy and maximum utilization of funds spent for relief purposes, the Secretary of Agriculture is hereby authorized, pursuant to cooperative agreement with the Secretary of the Interior, (1) to arrange for the settlement of the projects on a sound agricultural basis, and insofar as practicable, the location thereon of persons in need; (2) to extend guidance and advice to settlers thereon in matters of farm practice, soil conservation, and efficient land use; (3) to acquire agricultural lands within the boundaries of such projects, with titles and at prices satisfactory to him; and (4) to arrange for the improvement of lands within the project boundaries, including clearing, leveling, and preparing them for distribution of irrigation water. Contracts between the United States and water users or water users' organizations for the lease or purchase of, or the improvement of, lands within such projects shall provide for annual or semiannual payments to the United States, of the number and amounts fixed by the Secretary of Agriculture. The lease, purchase, or improvement contracts for each tract of land shall provide in the aggregate for the return, in not to exceed fifty years from the date the land is first settled upon, of the costs incurred by the United States in acquiring and improving such tract of land with funds appropriated under authority of section 12 (2), except administrative expenses incurred in the District of Columbia, together with interest on unpaid balances of said costs at not less than 3 per centum per annum. Such lease, purchase, or improvement contracts shall also provide for the fulfillment of such obligations related to reimbursable construction costs and operation and maintenance charges as may be applicable to such lands in accordance with the repayment contract or contracts required by section 4.

(b) For the purposes of this section, the Secretary of Agriculture may utilize (1) in such manner as the President may direct, services, labor, materials, or other property, including money, supplied by the Work Projects Administration, the Civilian Conservation Corps, the Office of Indian Affairs, the Department of Agriculture, or any other Federal agency to the extent that the President, upon the report and recommendations of the Secretary of Agriculture, finds that the same should be supplied in assistance of such improvement work, and for which the United States shall be reimbursed in such amounts as the President may fix for each project; and (2) such services, labor, materials, easements, or other property, including money, as may be contributed by any State or political subdivision thereof, State agency, municipal corporation, or other organization, or individuals. Moneys received and accepted under (2) of this subsection shall remain available for expenditure for the purposes for which contributed in like manner as if said sums had been specifically appropriated for said purposes.

SEC. 6. The Secretary, by cooperative agreements, may arrange with the Department of Agriculture or with such other Federal or State agencies, as the President may deem desirable, for cooperation in the investigations and surveys of projects proposed under the authority of this Act; and in con-

nection with any such project which is undertaken the Secretary by such cooperative agreements may arrange for such cooperation in the construction or operation and maintenance of the project as he deems desirable. Any such cooperative agreement with the Department of Agriculture may provide, among other things (1) that the Secretary of Agriculture shall enter into the repayment contracts, required by section 4, and shall handle the collections of repayments and shall take over the other administrative duties connected with the project, after the Secretary of the Interior announces that the project is ready for operation; (2) if such agreement be entered into after construction of the project has been undertaken by the Secretary of the Interior and after he has entered into the repayment contracts required by section 4, that the Secretary of Agriculture shall take over the collection of repayments and other administrative duties connected with the project; (3) that no water shall be delivered to or for any land or party while the owner of said land or said party is in arrears for more than twelve months in the payment to the United States of money due and payable under a land contract entered into pursuant to section 5 (a); and (4) that any repayment contract with a water user or water users' organization entered into pursuant to section 4 and any land contract with the same water user or organization entered into pursuant to section 5 (a), if said contracts involve the same land, may be combined in a single instrument. The Secretary of Agriculture is hereby authorized to carry out the provision of any such cooperative agreements.

SEC. 7. On any one project undertaken pursuant to the Act of August 28, 1937, entitled "An act to promote conservation in the arid and semiarid areas of the United States by aiding in the development of facilities for water storage and utilization, and for other purposes" (50 Stat. 869), as amended and supplemented, expenditures for the construction, maintenance, operation, rehabilitation or financial assistance of any one project, shall not exceed \$50,000 of Federal funds, whether appropriated or allotted or both. All project facilities and appurtenances which depend for their utility in whole or in part upon each other or upon any common facility shall be deemed one project within the meaning of this section.

* * * * *

SEC. 10. (a) In connection with any project constructed pursuant to the provisions of this Act, the Secretary shall have the same authority, with regard to the utilization of lands owned by the United States, other than lands acquired under section 5 as he has in connection with projects undertaken pursuant to the Federal reclamation laws, Act of June 17, 1902 (32 Stat. 388), and Acts amendatory thereof or supplementary thereto. * * *

SEC. 11. The Secretary of the Interior and the Secretary of Agriculture are hereby authorized to perform any and all Acts and to make such rules and regulations as may be necessary and proper for the purpose of carrying out their respective functions under this Act and for the purpose of carrying the provisions of this Act into full force and effect.

SEC. 12. To carry out the purposes of this Act there is hereby authorized to be appropriated, out of any money in the Treasury not otherwise appropriated (1) for the Department of the Interior such sums as may be necessary to carry out its functions under this Act, and (2) for the Department of Agriculture such sums as may be necessary to carry out its functions under this Act.

[Extracts from] An act to amend the Act of August 11, 1939 (53 Stat. 1418), as amended by the Act of October 14, 1940 (54 Stat. 1119), relating to water conservation and utilization projects. (Act of July 16, 1943, 57 Stat. 568, Public Law 152, 78th Cong., 1st sess.)

* * * That the last proviso of section 1 of the Act of August 11, 1939 (53 Stat. 1418), as amended (hereinafter referred to as the

Act), is hereby amended to read as follows: "*And provided further*, That expenditures from appropriations made directly pursuant to the authority contained in section 12 (1) to meet reimbursable construction costs allocated to irrigation as defined in section 4 (b) shall not exceed \$2,000,000 for dams and reservoirs in any one project, and that expenditures from appropriations made directly pursuant to the authority contained in section 12 (1) to meet costs allocated to flood control by the Secretary after consultation with the Chief of Engineers, War Department, shall not exceed \$500,000 on any one project."

SEC. 2. Subparagraph (vii) of subsection 3 (a) of the Act is hereby amended to read as follows:

(vii) The part of the estimated cost which can properly be allocated to flood control as recommended by the Secretary after consultation with the Chief of Engineers, War Department.

SEC. 3. Subsection 3 (b) of the Act is hereby amended to read as follows:

(b) No actual construction of the physical features of a project shall be undertaken unless and until (1) the Secretary has found that lands, or interests in lands, deemed necessary for the construction and operation of the major features of the projects have been secured, or sufficient progress made in their procurement to indicate the probability that all these lands or interests in lands can be secured, with titles and at prices satisfactory to him; and (2) the Secretary has found (i) that water rights adequate for the purposes of the project have been acquired with titles and at prices satisfactory to him, or that such water rights have been initiated and in his judgment can be perfected in conformity with State law and any applicable interstate agreements and in a manner satisfactory to him; and (ii) that such water rights can be utilized for the purposes of the project in conformity with State law and any applicable interstate agreements and in a manner satisfactory to him.

SEC. 4. Section 3 of the Act is hereby amended by the addition of the following subsection:

(c) Any part of a project hereunder may be designated as a division of the project by the Secretary if he, after consultation with the Secretary of Agriculture, deems this desirable for orderly and efficient construction or administration. The term "project," as used in subsection 3 (b) and section 4, shall be deemed to mean also "division of a project," designated as provided in this subsection. Any project authorized for construction from appropriations under the head "Water Conservation and Utility Projects" in the Interior Department Appropriation Act, 1940 (53 Stat. 685), hereinafter called the 1940 water conservation appropriation, may be designated by the Secretary, upon agreement with the Secretary of Agriculture, a project under this Act and shall thereupon be subject to all the provisions and requirements thereof, except those of subsections 3 (a) and 3 (b).

SEC. 5. Section 4 of the Act is hereby amended by the addition of the following subsection:

(d) For each project, on which construction is commenced or continued under this subsection, appropriations heretofore or hereafter made pursuant to section 12 and the unexpended balance of the 1940 water conservation

appropriation, in addition to being available for other authorized objects of expenditure, shall be available for expenditure, by the agency to which available, in lieu of the "services, labor, materials, or other property, including money," authorized to be utilized under section 2 and subsection 5 (b). All expenditures on each such project may be excluded (1) from the project construction costs to the extent the Secretary finds necessary to keep the reimbursable costs within the findings made under subsections 3 (a) (iv), 3 (a) (v), and 3 (a) (vi), and (2) from the costs that but for this subsection would be required to be returned under section 5, to the extent deemed necessary by the Secretary of Agriculture for the successful prosecution of the project; and as to each such project the limitations on expenditures provided in sections 1 and 9 shall be inoperative. Appropriations made pursuant to section 12 shall be available for expenditures for continuation of construction on any project heretofore undertaken under the 1940 water conservation appropriation, and such expenditures and those from the 1940 water conservation appropriation may be excluded from the costs of any such project in determining the amounts required to be reimbursed, to the extent the Secretary and the Secretary of Agriculture jointly determine is necessary to keep reimbursable costs within the ability of the water users to repay. No project may be initiated for construction or, if heretofore authorized, continued under this subsection unless the Secretary, following consultation with the Secretary of Agriculture, finds that the proposed construction under this subsection is justifiable as an aid in the production of needed agricultural products and the President approves said finding. The utilization of services or labor of prisoners of war under section 2 is authorized, subject to the approval of, and regulations by, the War Department or other Federal agency having control of said prisoners. From and after the date six months after the cessation of hostilities in the present war as determined by proclamation of the President or concurrent resolution of the Congress, this subsection shall no longer be of any force or effect except as to projects on which construction has been initiated or continued under this subsection prior to said date.

SEC. 6. Section 5 of the Act is hereby amended by the addition of the following subsection:

(c) Where the aggregate amount involved does not exceed \$300, the provisions of section 3709 of the Revised Statutes (41 U. S. C. 5) shall not apply to any purchase or service authorized for the Department of Agriculture under this Act or under the 1940 water conservation appropriation.

FLOOD CONTROL ACT OF 1944

[Extracts from] An act authorizing the construction of certain public works on rivers and harbors for flood control, and for other purposes. (Act of December 22, 1944, 58 Stat. 887, 890, 891, Public Law 534, 78th Cong., 2d sess.)

* * * In connection with the exercise of jurisdiction over the rivers of the Nation through the construction of works of improvement, for navigation or flood control, as herein authorized, it is hereby declared to be the policy of the Congress to recognize the interests and rights of the States in determining the development of the watersheds within their borders and likewise their interests and rights in water utilization and control, as herein authorized to preserve and protect to the fullest possible extent established and potential uses, for all purposes, of the waters of the Nation's rivers; to facilitate the consideration of projects on a basis of comprehensive and coordinated development; and to limit the authorization and construction of navigation works to those in which a substantial benefit to navigation will be realized therefrom and which can be operated consistently with appropriate and economic use of the waters of such rivers by other users.

In conformity with this policy:

(a) Plans, proposals, or reports of the Chief of Engineers, War Department, for any works of improvement for navigation or flood control not heretofore or herein authorized, shall be submitted to the Congress only upon compliance with the provisions of this paragraph (a). Investigations which form the basis of any such plans, proposals, or reports shall be conducted in such a manner as to give to the affected State or States, during the course of the investigations, information developed by the investigations and also opportunity for consultation regarding plans and proposals, and, to the extent deemed practicable by the Chief of Engineers, opportunity to cooperate in the investigations. If such investigations in whole or part are concerned with the use or control of waters arising west of the ninety-seventh meridian, the Chief of Engineers shall give to the Secretary of the Interior, during the course of the investigations, information developed by the investigations and also opportunity for consultation regarding plans and proposals, and to the extent deemed practicable by the Chief of Engineers, opportunity to cooperate in the investigations. The relations of the Chief of Engineers with any State under this paragraph (a) shall be with the Governor of the State or such official or agency of the State as the Governor may designate. The term "affected State or States" shall include those in which the works or any part thereof are proposed to be located; those which in whole or part are both within the drainage basin involved and situated in a State lying wholly or in part west of the ninety-eighth meridian; and such of those which are east of

the ninety-eighth meridian as, in the judgment of the Chief of Engineers, will be substantially affected. Such plans, proposals, or reports and related investigations shall be made to the end, among other things, of facilitating the coordination of plans for the construction and operation of the proposed works with other plans involving the waters which would be used or controlled by such proposed works. Each report submitting any such plans or proposals to the Congress shall set out therein, among other things, the relationship between the plans for construction and operation of the proposed works and the plans, if any, submitted by the affected States and by the Secretary of the Interior. The Chief of Engineers shall transmit a copy of his proposed report to each affected State, and, in case the plans or proposals covered by the report are concerned with the use or control of waters which rise in whole or in part west of the ninety-seventh meridian, to the Secretary of the Interior. Within ninety days from the date of receipt of said proposed report, the written views and recommendations of each affected State and of the Secretary of the Interior may be submitted to the Chief of Engineers. The Secretary of War shall transmit to the Congress, with such comments and recommendations as he deems appropriate, the proposed report together with the submitted views and recommendations of affected States and of the Secretary of the Interior. The Secretary of War may prepare and make said transmittal any time following said ninety-day period. The letter of transmittal and its attachments shall be printed as a House or Senate document.

(b) The use for navigation, in connection with the operation and maintenance of such works herein authorized for construction, of waters arising in States lying wholly or partly west of the ninety-eighth meridian shall be only such use as does not conflict with any beneficial consumptive use, present or future, in States lying wholly or partly west of the ninety-eighth meridian, of such waters for domestic, municipal, stock water, irrigation, mining, or industrial purposes.

(c) The Secretary of the Interior, in making investigations of and reports on works for irrigation and purposes incidental thereto shall, in relation to an affected State or States (as defined in paragraph (a) of this section), and to the Secretary of War, be subject to the same provisions regarding investigations, plans, proposals, and reports as prescribed in paragraph (a) of this section for the Chief of Engineers and the Secretary of War. In the event a submission of views and recommendations, made by an affected State or by the Secretary of War pursuant to said provisions, sets forth objections to the plans or proposals covered by the report of the Secretary of the Interior, the proposed works shall not be deemed authorized except upon approval by an Act of Congress; and subsection 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187) and subsection 3 (a) of the Act of August 11, 1939 (53 Stat. 1418), as amended, are hereby amended accordingly.

SEC. 2. That the words "flood control" as used in section 1 of the Act of June 22, 1936, shall be construed to include channel and

major drainage improvements, and that hereafter Federal investigations and improvements of rivers and other waterways for flood control and allied purposes shall be under the jurisdiction of and shall be prosecuted by the War Department under the direction of the Secretary of War and supervision of the Chief of Engineers, and Federal investigations of watersheds and measures for run-off and water-flow retardation and soil-erosion prevention on watersheds shall be under the jurisdiction of and shall be prosecuted by the Department of Agriculture under the direction of the Secretary of Agriculture, except as otherwise provided by Act of Congress.

SEC. 3. That section 3 of the Act approved June 22, 1936 (Public, Numbered 738, Seventy-fourth Congress), as amended by section 2 of the Act approved June 28, 1938 (Public, Numbered 761, Seventy-fifth Congress), shall apply to all works authorized in this Act, except that for any channel improvement or channel rectification project provisions (a), (b), and (c) of section 3 of said Act of June 22, 1936, shall apply thereto, and except as otherwise provided by law: *Provided*, That the authorization for any flood-control project herein adopted requiring local cooperation shall expire five years from the date on which local interests are notified in writing by the War Department of the requirements of local cooperation, unless said interests shall within said time furnish assurances satisfactory to the Secretary of War that the required cooperation will be furnished.

* * * * *

SEC. 5. Electric power and energy generated at reservoir projects under the control of the War Department and in the opinion of the Secretary of War not required in the operation of such projects shall be delivered to the Secretary of the Interior, who shall transmit and dispose of such power and energy in such manner as to encourage the most widespread use thereof at the lowest possible rates to consumers consistent with sound business principles, the rate schedules to become effective upon confirmation and approval by the Federal Power Commission. Rate schedules shall be drawn having regard to the recovery (upon the basis of the application of such rate schedules to the capacity of the electric facilities of the projects) of the cost of producing and transmitting such electric energy, including the amortization of the capital investment allocated to power over a reasonable period of years. Preference in the sale of such power and energy shall be given to public bodies and cooperatives. The Secretary of the Interior is authorized, from funds to be appropriated by the Congress, to construct or acquire, by purchase or other agreement, only such transmission lines and related facilities as may be necessary in order to make the power and energy generated at said projects available in wholesale quantities for sale on fair and reasonable terms and conditions to facilities owned by the Federal Government, public bodies, cooperatives, and privately owned

companies. All moneys received from such sale shall be deposited in the Treasury of the United States as miscellaneous receipts.

* * * * *

SEC. 8. Hereafter, whenever the Secretary of War determines, upon recommendation by the Secretary of the Interior that any dam and reservoir project operated under the direction of the Secretary of War may be utilized for irrigation purposes, the Secretary of the Interior is authorized to construct, operate, and maintain, under the provisions of the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto), such additional works in connection therewith as he may deem necessary for irrigation purposes. Such irrigation works may be undertaken only after a report and findings thereon have been made by the Secretary of the Interior as provided in said Federal reclamation laws and after subsequent specific authorization of the Congress by an authorization Act: and, within the limits of the water users' repayment ability such report may be predicated on the allocation to irrigation of an appropriate portion of the cost of structures and facilities used for irrigation and other purposes. Dams and reservoirs operated under the direction of the Secretary of War may be utilized hereafter for irrigation purposes only in conformity with the provisions of this section, but the foregoing requirement shall not prejudice lawful uses now existing: *Provided*, That this section shall not apply to any dam or reservoir heretofore constructed in whole or in part by the Army Engineers, which provides conservation storage of water for irrigation purposes.

SEC. 9. (a) The general comprehensive plans set forth in House Document 475 and Senate Document 191, Seventy-eighth Congress, second session, as revised and coordinated by Senate Document 247, Seventy-eighth Congress, second session, are hereby approved and the initial stages recommended are hereby authorized and shall be prosecuted by the War Department and the Department of the Interior as speedily as may be consistent with budgetary requirements.

(b) The general comprehensive plan for flood control and other purposes in the Missouri River Basin approved by the Act of June 28, 1938, as modified by subsequent Acts, is hereby expanded to include the works referred to in paragraph (a) to be undertaken by the War Department; and said expanded plan shall be prosecuted under the direction of the Secretary of War and supervision of the Chief of Engineers.

(c) Subject to the basin-wide findings and recommendations regarding the benefits, the allocations of costs and the repayments by water users, made in said House and Senate documents, the reclamation and power developments to be undertaken by the Secretary of the Interior under said plans shall be governed by the Federal Reclamation Laws (Act of June 17, 1902, 32 Stat. 338, and Acts amendatory thereof or supplementary thereto), except that irrigation of Indian trust and tribal lands, and repay-

ment therefor, shall be in accordance with the laws relating to Indian lands.

(d) In addition to previous authorizations there is hereby authorized to be appropriated the sum of \$200,000,000 for the partial accomplishment of the works to be undertaken under said expanded plans by the Corps of Engineers.

(e) The sum of \$200,000,000 is hereby authorized to be appropriated for the partial accomplishment of the works to be undertaken under said plans by the Secretary of the Interior.

FLOOD CONTROL ACT OF 1946

[Extracts from] An act authorizing the construction of certain public works on rivers and harbors for flood control, and for other purposes. (Act of July 24, 1946, 60 Stat. 641, 642, 643, 648, 653, Public Law 526, 79th Cong., 2d sess.)

* * * That this Act may be cited as the "Flood Control Act of 1946."

* * * * *

SEC. 2. The provisions of section 1 of the Act of December 22, 1944 (Public, Numbered 534, Seventy-eighth Congress, second session), shall govern with respect to projects herein authorized; and the procedures therein set forth with respect to plans, proposals, or reports for works of improvement for navigation or flood control and for irrigation and purposes incidental thereto shall apply as if herein set forth in full.

It is hereby declared to be the policy of the Congress that the following provisions shall be observed:

No project or any modification not authorized, of a project for flood control or rivers and harbors shall be authorized by the Congress unless a report for such project or modification has been previously submitted by the Chief of Engineers, United States Army, in conformity with existing law.

* * * * *

SEC. 4. That section 4 of the Act approved December 22, 1944 (Public, Numbered 534, Seventy-eighth Congress) is amended to read as follows:

The Chief of Engineers, under the supervision of the Secretary of War, is authorized to construct, maintain, and operate public park and recreational facilities in reservoir areas under the control of the War Department, and to permit the construction, maintenance, and operation of such facilities. The

Secretary of War is authorized to grant leases of lands, including structures or facilities thereon, in reservoir areas for such periods and upon such terms as he may deem reasonable: *Provided*, That leases to nonprofit organizations may be granted at reduced or nominal rentals in recognition of the public service to be rendered in utilizing the leased premises: *Provided further*, That preference shall be given to Federal, State, or local governmental agencies, and licenses may be granted without monetary considerations, to such agencies for the use of all or any portion of a reservoir area, when the Secretary of War determines such action to be in the public interest, and for such periods of time and upon such conditions as he may find advisable. The water areas of all such reservoirs shall be open to public use generally, without charge, for boating, swimming, bathing, fishing, and other recreational purposes, and ready access to and exit from such water areas along the shores of such reservoirs shall be maintained for general public use, when such use is determined by the Secretary of War not to be contrary to the public interest, all under such rules and regulations as the Secretary of War may deem necessary. No use of any area to which this section applies shall be permitted which is inconsistent with the laws for the protection of fish and game of the State in which such area is situated. All moneys received for leases or privileges shall be deposited in the Treasury of the United States as miscellaneous receipts.

* * * * *

SEC. 10. That the following works of improvement for the benefit of navigation and the control of destructive flood-waters and other purposes are hereby adopted and authorized to be prosecuted under the direction of the Secretary of War and the supervision of the Chief of Engineers in accordance with the plans in the respective reports hereinafter designated and subject to the conditions set forth therein: *Provided*, That the necessary plans, specifications, and preliminary work may be prosecuted on any project authorized in this Act with funds from appropriations heretofore or hereafter made for flood control so as to be ready for rapid inauguration of a construction program: *Provided further*, That the projects authorized herein shall be initiated as expeditiously and prosecuted as vigorously as may be consistent with budgetary requirements: *And provided further*, That penstocks and other similar facilities adapted to possible future use in the development of hydroelectric power shall be installed in any dam authorized in this Act for construction by the War Department when approved by the Secretary of War on the recommendation of the Chief of Engineers and the Federal Power Commission:

* * * * *

MISSOURI RIVER BASIN

In addition to previous authorizations, there is hereby authorized to be appropriated the sum of \$150,000,000 for the prosecution of the comprehensive plan approved by the Act of June 28, 1938, as expanded by section 9a of the Act approved December 22, 1944 (Public, Numbered 534, Seventy-eighth Congress), for continuing the works in the Missouri River Basin to be undertaken under said expanded plans by the Corps of Engineers.

The project for flood protection at Mandan, North Dakota, on Heart River, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 294, Seventy-ninth Congress, first session, at an estimated cost of \$246,000.

* * * * *

SEC. 18. In addition to previous authorizations, there is hereby authorized to be appropriated the sum of \$150,000,000 for the prosecution of the comprehensive plan adopted by section 9a of the Act approved December 22, 1944 (Public, Numbered 534, Seventy-eighth Congress), for continuing the works in the Missouri River Basin to be undertaken under said plans by the Secretary of the Interior.

REHABILITATION AND BETTERMENT

An act to provide for the return of rehabilitation and betterment costs of Federal reclamation projects. (Act of October 7, 1949, 63 Stat. 724, Public Law 335, 81st Cong., 1st sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That expenditures of funds hereafter specifically appropriated for rehabilitation and betterment of irrigation systems on projects governed by the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto) shall be made only after the organizations concerned shall have obligated themselves for the return thereof in installments fixed in accordance with their ability to pay, as determined by the Secretary of the Interior in the light of their outstanding repayment obligations, and which shall, to the fullest practicable extent, be scheduled for return with their construction charge installments or otherwise scheduled as he shall determine. No such determination of the Secretary of the Interior shall become effective until the expiration of sixty days after it has been submitted to the Committee on Interior and Insular Affairs of the Senate and the Committee on Public Lands of the House of Representatives. The term "rehabilitation and betterment", as used in this Act, shall mean maintenance, including replacements, which cannot be financed currently, as otherwise contemplated by the Federal reclamation laws in the case of operation and maintenance costs, but shall not include construction, the costs of which are returnable, in whole or in part, through "construction charges" as that term is defined in section 2 (d) of the Reclamation Project Act of 1939 (53 Stat. 1187). Such rehabilitation and betterment work may be performed by contract, by force-account, or, notwithstanding any other law and subject only to such reasonable terms and conditions as the Secretary of the Interior shall deem appropriate for the protection of the United States, by contract entered into with the organization concerned whereby such organization shall perform such work.

SEC. 2. This Act shall be deemed a supplement to the Federal reclamation laws.

An act to expedite the rehabilitation of Federal reclamation projects in certain cases. (Act of March 3, 1950, 64 Stat. 11, Public Law 451, 81st Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the second

sentence of the Act entitled "An Act to provide for the return of rehabilitation and betterment costs of Federal reclamation projects", approved October 7, 1949, is amended by striking out the period at the end thereof and inserting a semicolon and the following: "except that, any such determination may become effective prior to the expiration of such sixty days in any case in which each such committee approves an earlier date and notifies the Secretary, in writing, of such approval: *Provided*, That when Congress is not in session the Secretary's determination, if accompanied by a finding by the Secretary that substantial hardship to the water users concerned or substantial further injury to the project works will result, shall become effective when the chairman and ranking minority member of each such committee shall file with the Secretary their written approval of said findings."

LOAN PROGRAM—DISTRIBUTION SYSTEMS

An act to provide for the construction of distribution systems on authorized Federal reclamation projects by irrigation districts and other public agencies. (Act of July 4, 1955, 69 Stat. 244, Public Law 130, 84th Cong., 1st sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That irrigation distribution systems authorized to be constructed under the Federal reclamation laws may, in lieu of construction by the Secretary of the Interior (referred to in this Act as the "Secretary"), be constructed by irrigation districts or other public agencies according to plans and specifications approved by the Secretary as provided in this Act.

SEC. 2. To assist financially in the construction of the aforesaid local irrigation distribution systems by irrigation districts and other public agencies the Secretary is authorized, on application therefor by such irrigation districts or other public agencies, to make funds available on a loan basis from moneys appropriated for the construction of such distribution systems to any irrigation district or other public agency in an amount equal to the estimated construction cost of such system, contingent upon a finding by the Secretary that the loan can be returned to the United States in accordance with the general repayment provisions of sections 2 (d) and 9 (d) of the Reclamation Project Act of August 4, 1939, and upon a showing that such district or agency already holds or can acquire all lands and interests in land (except public and other lands or interests in land owned by the United States which are within the administrative jurisdiction of the Secretary and subject to disposition by him) necessary for the construction, operation, and maintenance of the project. The Secretary shall, upon approval of the loan, enter into a repayment contract which includes such provisions as the Secretary shall deem necessary and proper to provide assurance of prompt repayment of the loan. The term "irrigation district or other public agency" shall for the purposes of this Act mean any conservancy district, irrigation district, water users' organization, or other organization, which is organized under State law and which has capacity to enter into contracts with the United States pursuant to the Federal reclamation laws.

SEC. 3. The Secretary shall require as a condition to any such loan, that the water users' organization contribute in money or materials, labor, lands, or interests in land, computed at their reasonable value, a portion, not in excess of ten per centum, of the construction cost of such project (including all costs of acquiring lands, and interests in land), and that the plans for the distribution system are in accord with sound engineering practices and will achieve the purposes for which the system was authorized. Organizations contracting for repayment of the loans shall operate

and maintain such works in conformity with reasonable contractual requirements determined to be appropriate for the protection of the United States, and when full repayment has been made to the United States, the Secretary shall relinquish all claims under said contracts. Title to distribution works constructed pursuant to this Act shall at all times be in the contracting water users' organizations. In addition to any other authority the Secretary may have to grant rights-of-way, easements, flowage rights, or other interests in lands for project purposes, the Secretary or the head of any other executive department may sell and convey to any irrigation district or other public agency at fair value lands and rights-of-way owned by the United States (other than lands being administered for national park, national monument, or wildlife purposes) which are reasonably necessary to the construction operation, and maintenance of an irrigation distribution system under the provisions of this Act. No benefits or privileges under reclamation laws including repayment provisions shall be denied an irrigation distribution system because such system has been constructed pursuant to this Act. The provisions of this Act shall apply only to irrigation purposes, including incidental domestic and stock water, and loans hereunder shall be interest free. Nothing in this Act shall be construed to repeal or limit the procedural and substantive requirements of section 8 of the Act of June 17, 1902.

SEC. 4. Except as herein otherwise provided, the provisions of the Federal reclamation laws, and Acts amendatory thereto, are continued in full force and effect.

An act to amend the Act of July 4, 1955, relating to the construction of irrigation distribution systems. (Act of May 14, 1956, 70 Stat. 155, Public Law 520, 84th Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 3 of the Act of July 4, 1955 (69 Stat. 245) is hereby amended to read as follows:

"SEC. 3. The Secretary shall require, as conditions to any such loan, that the borrower contribute in money or materials, labor, lands, or interests in land, computed at their reasonable value, a portion, not in excess of 10 per centum, of the construction cost of the distribution system (including all costs of acquiring lands and interests in land), that the plans for the system be in accord with sound engineering practices and be such as will achieve the purposes for which the system was authorized, and that the borrower agree to account in full in regard to all disbursements of borrowed funds and to return at once for application toward amortization of the loan all funds which are not expended in the construction of the distribution system. Prior to the consummation of any loan under this Act, the borrower shall also be required

to transfer to the United States any lands or interests in land which it then holds and which the Secretary finds are required for the construction, operation, and maintenance of the distribution system and to agree to transfer to the United States any lands or interests in land which it may thereafter acquire and which the Secretary may find are required for this purpose and distribution works constructed, in whole or in part, with moneys lent under this Act for the construction thereof. Title to all such lands, interests in land and distribution works shall remain in the United States until the loan is repaid. Every organization contracting for repayment of a loan under this Act shall operate and maintain its distribution works in conformity with reasonable contractual requirements determined to be appropriate for the protection of the United States. When full repayment has been made to the United States, the Secretary shall relinquish all claims under said contracts and shall retransfer to the borrower title to the works and all lands and interests in land which were transferred by it to the United States. The head of any department or agency of the Government within whose administrative jurisdiction are lands owned by the United States the use of which is reasonably necessary for the construction, operation, and maintenance of distribution works under this Act may grant to a borrower or prospective borrower under this Act revocable permission for the use thereof in like manner as under the Acts of March 3, 1891, secs. 18-21, 26 Stat. 1101, as amended (43 U. S. C., secs. 946-949), January 21, 1895, 28 Stat. 635, as amended (43 U. S. C., sec. 956), February 15, 1901, 31 Stat. 790, as amended (16 U. S. C., secs. 79, 522, 43 U. S. C., sec. 959), February 1, 1905, 33 Stat. 628 (16 U. S. C., sec. 524), March 1, 1921, 41 Stat. 1194 (43 U. S. C., sec. 950), May 9, 1941, 55 Stat. 183 (43 U. S. C., sec. 931a), July 24, 1946, sec. 7, 60 Stat. 643, as amended (43 U. S. C. sec. 931b), May 31, 1947, 61 Stat. 124 (38 U. S. C., sec. 11i), February 5, 1948, 62 Stat. 17 (25 U. S. C., secs. 323-328), or September 3, 1954, 68 Stat. 1146 (43 U. S. C., secs. 931c-931d), or any other similar Act which is applicable to the lands involved: *Provided*, That no such permission shall be granted in the case of lands being administered for national park, national monument, or wildlife purposes. No benefits or privileges under the Federal reclamation laws, including repayment provisions, shall be denied an irrigation distribution system because such system has been constructed pursuant to this Act. The provisions of this Act shall apply only to irrigation purposes, including incidental domestic and stock water, and loans hereunder shall be interest free. Nothing in this Act shall be construed to repeal or limit the procedural and substantive requirements of section 8 of the Act of June 17, 1902."

SMALL RECLAMATION PROJECTS ACT OF 1956

An act to supplement the Federal reclamation laws by providing for Federal cooperation in non-Federal projects and for participation by non-Federal agencies in Federal projects. (Act of August 6, 1956, 70 Stat. 1044, Public Law 984, 84th Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the purpose of this Act is to encourage State and local participation in the development of projects under the Federal reclamation laws and to provide for Federal assistance in the development of similar projects in the seventeen western reclamation States by non-Federal organizations.

SEC. 2. As used in this Act—

(a) The term “construction” shall include rehabilitation and betterment.

(b) The term “Federal reclamation laws” shall mean the Act of June 17, 1902 (32 Stat. 388), and Acts amendatory thereof or supplementary thereto.

(c) The term “organization” shall mean a State or a department, agency, or political subdivision thereof or a conservancy district, irrigation district, water users’ association, an agency created by interstate compact, or similar organization which has capacity to contract with the United States under the Federal reclamation laws.

(d) The term “project” shall mean (i) any complete irrigation undertaking, including incidental features thereof, or distinct unit of such an undertaking or a rehabilitation and betterment program for an existing irrigation project, authorized to be constructed pursuant to the Federal reclamation laws and (ii) any similar undertaking proposed to be constructed by an organization. The term “project” shall not include any such undertaking, unit, or program the cost of which exceeds \$5,000,000: *Provided*, That any project, the estimated cost of which is more than \$5,000,000 but less than \$10,000,000, may qualify under this Act if the applicant organization is ready, able, and willing to finance otherwise than by loan or grant under this Act all costs in excess of the amount of the loan or grant which would be made under this Act if the estimated construction cost were \$5,000,000: *Provided further*, That nothing contained in this definition shall preclude the making of a grant not in excess of \$5,000,000 in accordance with the provisions of sections 4 and 5 of this Act, to organizations whose proposed projects qualify for the same but which are not applicants for a loan under this Act: *And provided further*, That nothing contained in this Act shall preclude the making of more than one loan or grant, or combined loan and

grant, to an organization so long as no two such loans or grants, or combinations thereof, are for the same project, as herein defined.

(e) The term "Secretary" shall mean the Secretary of the Interior.

SEC. 3. Any organization desiring to avail itself of the benefits provided in this Act shall submit a proposal therefor to the Secretary in such form and manner as he shall prescribe. Each such proposal shall be accompanied by a payment of \$1,000 to defray, in part, the cost of examining the proposal.

SEC. 4 (a) Any proposal with respect to the construction of a project which has not theretofore been authorized for construction under the Federal reclamation laws shall set forth, among other things, a plan and estimated cost in detail comparable to those included in preauthorization reports required for a Federal reclamation project; shall have been submitted for review by the States of the drainage basin in which the project is located in like manner as provided in subsection (c), section 1 of the Act of December 22, 1944 (58 Stat. 887), except that the review may be limited to the State or States in which the project is located if the proposal is one solely for rehabilitation and betterment of an existing project; and shall include a proposed allocation of capital costs to functions such that costs for facilities used for a single purpose shall be allocated to that purpose and costs for facilities used for more than one purpose shall be so allocated among the purposes served that each purpose will share equitably in the costs of such joint facilities.

(b) Every such proposal shall include a showing that the organization already holds or can acquire all lands and interests in land (except public and other lands and interests in land owned by the United States which are within the administrative jurisdiction of the Secretary and subject to disposition by him) and rights, pursuant to applicable State law, to the use of water necessary for the successful construction, operation, and maintenance of the project and that it is ready, able, and willing to finance otherwise than by loan and grant under this Act such portion of the cost of construction (which portion shall include all costs of acquiring lands, interests in land, and rights to the use of water) as the Secretary shall have advised is proper in the circumstances: *Provided*, That the contribution of any applicant organization shall not be required to be in excess of 25 per centum of the costs of the project which, if it were being constructed as a Federal reclamation project, would be properly allocable to reimbursable functions under general provisions of law applicable to such projects.

(c) If the project is found by the Secretary and the Governor of the State in which it is located (or an appropriate State agency designated by him) to be financially feasible and upon determination by the Secretary that the requested project constitutes a reasonable risk under the provisions of this Act, the Secretary is hereby authorized to negotiate a contract with the applicant organization as provided in section 5; but no such contract shall be executed by the Secretary prior to sixty calendar days (which

sixty days, however, shall not include days on which either the House of Representatives or the Senate is not in session because of an adjournment of more than three days to a day certain) from the date on which the project proposal has been submitted to both branches of the Congress for consideration by the appropriate committees thereof, and then only if neither such committee, by committee resolution and notification in writing to the Secretary, disapproves the project proposal within such period: *Provided*, That if both such committees, in the same manner and prior to the expiration of such period, approve the project proposal, then the Secretary may proceed to execute the contract: *Provided further*, That in the event either committee disapproves the project proposal, the Secretary shall not proceed further unless the Congress has approved the same. The Secretary at the time of submitting the project proposal to Congress or at the time of his determination that the requested project constitutes a reasonable risk under the provisions of this Act, may reserve from use or disposition inimical to the project any lands and interests in land owned by the United States which are within his administrative jurisdiction and subject to the disposition by him and which are required for use by the project. Any such reservation shall expire at the end of two years unless the repayment contract provided for in section 5 of this Act shall have been executed.

(d) The Secretary shall give due consideration to financial feasibility, emergency, or urgent need for the project, whether the proposal involves furnishing supplemental irrigation water for an existing irrigation project, whether the proposal involves rehabilitation of existing irrigation project works, and whether the proposed project is primarily for irrigation. All project works and facilities constructed under this Act shall remain under the jurisdiction and control of the local contracting organization subject to the terms of the repayment contract.

SEC. 5. Any contract authorized to be negotiated under the provisions of subsection (c) of section 4 of this Act shall set out, among other things—

(a) the maximum amount of any loan to be made to the organization and the time and method of making the same available to the organization. Said loan shall not exceed that portion of the estimated cost of constructing the project which, if it were being constructed as a Federal reclamation project, would be properly allocable to reimbursable functions under general provisions of law applicable to such projects;

(b) the maximum amount of any grant to be accorded the organization and the time and method of paying the same to the organization. Said grant shall not exceed that portion of the estimated cost of constructing the project which, if it were being constructed as a Federal reclamation project, would be properly allocable to nonreimbursable functions under general provisions of law applicable to such projects;

(c) a plan of repayment by the organization of (1) the sums lent to it in not more than fifty years from the date when the principal benefits of the project first become available ; (2) inter-

est, as determined by the Secretary of the Treasury, by estimating the average annual yield to maturity, on the basis of daily closing market bid quotations or prices during the month of May preceding the fiscal year in which the loan is made, on all outstanding marketable obligations of the United States having a maturity date of fifteen or more years from the first day of such month of May, and by adjusting such estimated average annual yield to the nearest one-eighth of 1 per centum at the beginning of the fiscal year preceding the date on which the contract is executed, on that pro rata share of the loan which is attributable to furnishing irrigation benefits in each particular year to land held in private ownership by any one owner in excess of one hundred and sixty irrigable acres; and (3) in the case of any project involving an allocation to domestic, industrial, or municipal water supply, or commercial power produced as an element of the project and incidental to its full development, interest on the unamortized balance of an appropriate portion of the loan at a rate as determined in (2) above;

(d) provision for operation of the project, if a grant predicated upon its performance of nonreimbursable functions is made, in accordance with regulations with respect thereto prescribed by the head of the Federal department or agency primarily concerned with those functions and, in the event of noncompliance with such regulations, for operation by the United States or for repayment to the United States of the amount of any such grant;

(e) such provisions as the Secretary shall deem necessary or proper to provide assurance of and security for prompt repayment of the loan and interest as aforesaid. The liability of the United States under any contract entered into pursuant to this Act shall be contingent upon the availability of appropriations to carry out the same, and every such contract shall so recite; and

(f) provisions conforming to the preference requirements contained in the proviso to section 9 (c) of the Act of August 4, 1939 (53 Stat. 1193), if the project produces electric power for sale.

SEC. 6. Any proposal with respect to the construction of a project which has theretofore been authorized for construction under the Federal reclamation laws shall be made in like manner as a proposal under section 4 of this Act, but the Secretary may waive such requirements of subsections (a) and (b) of that section as he finds to be duplicative of, or rendered unnecessary or impossible by, action already taken by the United States. Upon approval of any such proposal by the Secretary he may negotiate and execute a contract which conforms, as nearly as may be, to the provisions of section 5 of this Act.

SEC. 7. Upon request of an organization which has made or intends to make a proposal under this Act, the head of any Federal department or agency may make available to the organization any existing engineering, economic, or hydrologic information and printed material that it may have and that will be useful in connection with the planning, design, construction, or operation and maintenance of the project concerned. The reasonable cost of any plans, specifications, and other unpublished material furnished by

the Secretary pursuant to this section and the cost of making and administering any loan under this Act shall, to the extent that they would not be nonreimbursable in the case of a project constructed under the Federal reclamation laws, be treated as a loan and covered in the provisions of the contract entered into under section 5 of this Act unless they are otherwise paid for by the organization.

SEC. 8. The planning and construction of projects undertaken pursuant to this Act shall be subject to all procedural requirements and other provisions of the Act of August 14, 1946 (60 Stat. 1080).

SEC. 9. The Secretary is authorized to perform any and all acts and to make such rules and regulations as may be necessary or proper in carrying out the provisions of this Act.

SEC. 10. There are hereby authorized to be appropriated, such sums as may be necessary, but not to exceed \$100,000,000 to carry out the provisions of this Act: *Provided*, That the Secretary shall advise the Congress promptly on the receipt of each proposal referred to in section 3, and no contract shall become effective until appropriated funds are available to initiate the specific proposal covered by each contract. All such appropriations shall remain available until expended and shall, insofar as they are used to finance loans made under this Act, be reimbursable in the manner hereinabove provided.

SEC. 11. This Act shall be a supplement to the Federal reclamation laws and may be cited as the Small Reclamation Projects Act of 1956.

SEC. 12. If any provision of this Act or the application of such provision to any person, organization, or circumstance shall be held invalid, the remainder of the Act and the application of such provision to persons, organizations, or circumstances other than those as to which it is held invalid shall not be affected thereby.

HAWAIIAN INVESTIGATIONS

An act to authorize the Secretary of the Interior to investigate and report to the Congress on the conservation, development, and utilization of the irrigation and reclamation resources of the Waimanalo, Oahu; Waimea, Island of Hawaii; and Molokai projects, Territory of Hawaii. (Act of August 23, 1954, 68 Stat. 773, Public Law 634, 83d Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the purpose of encouraging and promoting the development of the Waimanalo, Oahu; Waimea, Island of Hawaii; and Molokai projects, Territory of Hawaii, the Secretary of the Interior (hereinafter referred to as the "Secretary") is authorized to make an investigation relating to the conservation, development, and utilization of the irrigation and reclamation resources of the Waimanalo, Oahu; Waimea, Island of Hawaii; and Molokai projects, Territory of Hawaii, and to report thereon, with appropriate recommendations to the President and the Congress.

SEC. 2. Prior to the transmission of any such report on a project to the Congress, the Secretary shall transmit copies thereof for information and comment to the Governor of Hawaii, or to such representative as may be named by him, and to the heads of interested Federal departments and agencies. The written views and recommendations of the aforementioned officials may be submitted to the Secretary within ninety days from the day of receipt of said proposed report. The Secretary may thereafter transmit to the Congress, with such comments and recommendations as he deems appropriate, his report, together with copies of the views and recommendations received from the aforementioned officials. The letter of transmittal and its attachments shall be printed as a House or Senate Document.

ALASKAN INVESTIGATIONS

Prior to the act of August 9, 1955, Alaskan investigations were authorized by special provisions in the annual appropriation acts. This provision in the Interior Department Appropriation Act for 1949 is cited with the authorization of August 9, 1955.

PROVISIONS OF INTERIOR DEPARTMENT APPROPRIATION ACT, 1949

[Extract from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1949, and for other purposes. (Act of June 29, 1948, 62 Stat. 1112, Public Law 841, 80th Cong., 2d sess.)

* * * * *

Alaskan Investigations. For engineering and economic investigations, as a basis for legislation, and for reports thereon, relating to projects for the development and utilization of the water power resources of Alaska, \$150,000, which shall be available for, but not restricted to, services as authorized by section 15 of the Act of August 2, 1946 (5 U.S.C. 55a), and rations and quarters for field parties while away from inhabited communities in which such facilities are available. * * *

An act to authorize the Secretary of the Interior to investigate and report to the Congress on projects for the conservation, development, and utilization of the water resources of Alaska. (Act of August 9, 1955, 69 Stat. 618, Public Law 322, 84th Cong., 1st sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the purpose of encouraging and promoting the development of Alaska, the Secretary of the Interior (hereinafter referred to as the "Secretary") is authorized to make investigations of projects for the conservation, development, and utilization of the water resources of Alaska and to report thereon, with appropriate recommendations, from time to time, to the President and to the Congress.

SEC. 2. Prior to the transmission of any such report to the

Congress, the Secretary shall transmit copies thereof for information and comment to the Governor of Alaska, or to such representative as may be named by him, and to the heads of interested Federal departments and agencies. The written views and recommendations of the aforementioned officials may be submitted to the Secretary within ninety days from the day of receipt of said proposed report. The Secretary shall immediately thereafter transmit to the Congress, with such comments and recommendations as he deems appropriate, his report together with copies of the views and recommendations received from the aforementioned officials. The letter of transmittal and its attachments shall be printed as a House or Senate document.

SEC. 3. There are hereby authorized to be appropriated not more than \$250,000 in any one fiscal year.

SUMMARY TABULATIONS

Projects authorized for construction through June 30, 1956.

Number	Project	State	Authorization		Status in fiscal year 1957
			Date	Authority	
	(All-American Canal System) -----	Arizona-California	Dec. 21, 1928	Congress	Part of Boulder Canyon Project.
1*	(Altus) W. C. Austin -----	Oklahoma	June 28, 1938	Do.	Name changed May 16, 1947.
2	Angostura -----	South Dakota	Mar. 6, 1941	President	Constructed under MRE.
3	(Arch Hurley) Tucumcari -----	New Mexico	Nov. 1, 1938	Do.	Pursuant to act of April 9, 1938.
4	Arnold -----	Oregon	July 25, 1947	Congress	Operated by water users.
5	Austin, W. C. (Lugert-Altus) -----	Oklahoma	June 28, 1938	Do.	Operated by water users and United States.
6	Avondale -----	Idaho	July 31, 1953	Do.	(Drainage and minor construction).
7	Baker -----	Oregon	Mar. 18, 1931	President	Operated by water users.
	Balmorhea -----	Texas	Apr. 15, 1944	Do.	Do.
	Belle Fourche -----	South Dakota	May 10, 1904	Secretary	Do.
8*	(Birch Creek) Umatilla -----	Oregon	Dec. 28, 1936	Do.	NIRA funds approved.
9	Bismarck-original -----	North Dakota	Nov. 18, 1904	Do.	Secondary, November 16, 1906.
	(Bismarck) -----	Do.	Apr. 26, 1940	President	WCU—Not constructed.
	Bitter Root -----	Montana	July 3, 1930	Congress	Operated by water users (R.&B.).
	(Bitterroot Valley-Woodside) -----	Do.	Mar. 22, 1944	President	WCU—Not constructed.
10	Boise -----	Do.	Mar. 1, 1907	Congress	Operated by United States (Indian Office).
11	Boulder Canyon: -----	Idaho-Oregon	Mar. 27, 1905	Secretary	Operated by water users and United States (R.&B.).
	All-American Canal System. -----	Arizona-California	Dec. 21, 1928	Congress	Operated by water users and United States (D.&M.C.).
	Hoover Dam and Powerplant. -----	Arizona-Nevada	Do.	Do.	Construction. Operated by United States.
12	Buffalo Rapids: -----	Montana	Sept. 27, 1937	President	Operated by water users (D.&M.C.).
	First Division -----	Do.	Oct. 11, 1939	Do.	Do.
13*	Second Division -----	Do.	Nov. 18, 1904	Secretary	Abandoned May 26, 1926.
14	Buford-Trenton (old) -----	North Dakota	Sept. 23, 1939	President	Construction. Operated by water users.
	(Buford-Trenton (new)) -----	Do.	Apr. 26, 1941	Secretary	Name changed June 26, 1941.
15	(Bullhead Dam) Davis Dam -----	Arizona-Nevada	Sept. 25, 1935	Do.	Operated by water users.
	Burnt River -----	Oregon	Sept. 25, 1935	Do.	Part of Rio Grande Project.
16	(Caballo Dam) Rio Grande -----	New Mexico	June 4, 1936	Congress	Construction. Operated by water users and United States.
17	Cachuma (Santa Barbara) -----	California	Mar. 4, 1948	Secretary	Not yet under construction.
	Canadian River -----	Texas	Dec. 29, 1950	Congress	Do.
18	Carlsbad -----	New Mexico	Nov. 28, 1905	President	Construction. Operated by water users and United States.
	(Casper-Alcoya) Kendrick -----	Wyoming	Aug. 30, 1935	Secretary	Name changed August 9, 1937.
19	Central Valley -----	California	Dec. 2, 1935	Do.	Construction. Operated by water users and United States.

Number	Project	State	Authorization		Status in fiscal year 1957
			Date	Authority	
20	Chief Joseph Dam, Foster Creek.	Washington.	July 27, 1954	Congress	Construction.
21	Colihra.	Colorado.	July 3, 1952	Do.	Do.
22	(Cody) Shoshone.	Wyoming.	Feb. 10, 1904	Secretary	Name changed.
23	Colorado-Big Thompson.	Colorado.	Dec. 21, 1937	President	Construction. Operated by water users and United States.
24	Dalton River.	Texas.	Aug. 26, 1937	Congress	Operated by water users.
25	Colorado River Work and Levee System.	Arizona-California-Nevada.	July 1, 1940	Do.	Operated by United States (D.&M.C.).
26	Colorado River Storage.	Various.	Apr. 11, 1956	Do.	Construction.
27	Columbia Basin.	Washington.	Aug. 30, 1935	Do.	Construction. Operated by United States.
28	Crescent Lake Dam.	Oregon.	July 1, 1954	Do.	Operated by water users (D.&M.C.).
29	Dalton Gardens.	Idaho.	July 31, 1953	Do.	Operated by water users.
30	(Davis Dam) Parker-Davis.	Nevada-Arizona-California.	Apr. 26, 1941	Secretary	Combined with Parker Dam May 28, 1954.
31	Deschutes.	Oregon.	Nov. 1, 1937	President	Construction. Operated by water users.
32	Eden.	Wyoming.	Sept. 18, 1940	Do.	Construction. Operated by United States.
33	Eklutna.	Alaska.	July 31, 1950	Congress	Operated by United States (D.&M.C.).
34	Falcon.	Texas.	June 18, 1954	Do.	Operated by United States (Sale of energy only).
35	(Flathead-Indian).	Montana.	Apr. 30, 1908	Do.	Operated by United States (Indian Office).
36	(Fort Buford) Lower Yellowstone.	Montana-North Dakota.	May 10, 1904	Secretary	Part of Lower Yellowstone Project.
37	(Fort Peck-Indian).	Montana.	May 30, 1908	Congress	Operated by United States (Indian Office).
38	Fort Peck.	Montana-North Dakota.	May 18, 1938	Do.	Construction. Operated by United States.
39	(Fort Shaw) Sun River.	Montana.	Feb. 26, 1906	Secretary	Division of Sun River Project.
40	Fort Sumner.	New Mexico.	July 29, 1949	Congress	Operated by water users.
41*	Frenchtown.	Montana.	Sept. 21, 1935	President	Do.
42	Fruitgrowers Dam.	Colorado.	Jan. 11, 1938	Do.	Do.
43	Garden City.	Kansas.	Oct. 5, 1905	Secretary	Abandoned June 5, 1920.
44	Gila.	Arizona.	June 21, 1937	President	Construction. Operated by water users and United States.
45	(Grand Coulee) Columbia Basin.	Washington.	Aug. 30, 1935	Congress	Name changed March 10, 1943.
	Grand Valley.	Colorado.	Jan. 5, 1911	President	Operated by water users (R.&B.).
	Grants Pass.	Oregon.	Oct. 12, 1949	Congress	Construction. Operated by water users.
	(Gunnison) Uncompahgre.	Colorado.	Mar. 14, 1903	Secretary	Name changed June 7, 1904.
	Hondo.	New Mexico.	Nov. 10, 1903	Do.	Abandoned April 1, 1917.
	(Hoover Dam and Powerplant).	Arizona-Nevada.	Dec. 21, 1928	Congress	Part of Boulder Canyon Project.
	Humboldt.	Nevada.	Nov. 6, 1935	Congress	Operated by water users (R.&B.).
	Hungry Horse.	Montana.	June 5, 1944	Congress	Operated by United States.
	Huntley.	Do.	Apr. 18, 1905	Secretary	Operated by water users.
	Hyrum (Salt Lake Basin).	Utah.	Nov. 6, 1935	President	Do.

46	(Imperial Dam)-----	Arizona-California-----	Dec. 21, 1928	Congress	Part of Gila and All-American Canal System. Operated by water users.
47	Intake-----	Montana-----	Jan. 30, 1934	President	Operated by United States (D.&M.C.).
48*	Kendrick-----	Wyoming-----	Aug. 30, 1935	Do.	Superseded by Yakima, Kennewick Division.
49*	Kennewick Highlands-----	Washington-----	Mar. 7, 1931	Do.	Constructed by Yakima, Kennewick Division.
50*	(Kern River)-----	California-----	June 29, 1948	Congress	Abandoned September 28, 1934
51	King Hill-----	Idaho-----	June 12, 1917	Do.	Construction. Operated by Corps of Engineers.
52*	Kings River-----	California-----	Jan. 24, 1940	Secretary	Operated by water users and United States (D.&M.C.).
53	Klamath-----	Oregon-California-----	May 15, 1905	Do.	Not built.
54	(Leasburg) Rio Grande-----	Oklahoma-----	Oct. 8, 1914	President	Part of Rio Grande Project.
	Lewisport Orchards-----	New Mexico-----	Dec. 2, 1905	Secretary	Operated by water users.
	Lower Yellowstone (Fort Buford)-----	Idaho-----	July 31, 1946	Congress	Operated by water users.
		Montana-----	May 10, 1904	Secretary	Do.
		North Dakota-----			
55*	(Lugert-Altus) W. C. Austin-----	Oklahoma-----	June 28, 1938	Congress	Name changed May 16, 1947.
56	Malheur-----	Oregon-----	May 11, 1904	Secretary	Rescinded February 10, 1906.
57*	Mancos-----	Colorado-----	Oct. 24, 1940	President	Operated by water users and United States.
58	Mann Creek-----	Idaho-----	July 7, 1941	Do.	Discontinued.
59	(McKay Dam) Umatilla-----	Oregon-----	Dec. 4, 1905	Secretary	South Division (Dam approved March 3, 1923).
60	Michaud Flats-----	Idaho-----	Aug. 31, 1954	Congress	Construction.
61	Middle Rio Grande-----	New Mexico-----	May 17, 1950	Do.	Construction. Operated by United States.
62	Milk River-----	Montana-----	Mar. 14, 1903	Secretary	Operated by water users and United States (R.&B.).
	Minidoka-----	Idaho-Wyoming-----	Apr. 23, 1904	Do.	Construction. Operated by water users and United States.
	Mirage Flats-----	Nebraska-----	Apr. 26, 1940	President	Operated by water users.
63	Missoula Valley-----	Montana-----	May 10, 1944	Do.	Do.
64	(Missouri River Basin)-----	Various-----	Dec. 22, 1944	Congress	Construction. Operated by water users and United States.
65	Moon Lake-----	North Dakota-----	Jan. 23, 1906	Secretary	Williston and Buford-Trenton Projects.
66*	Nelson-----	Utah-----	Nov. 6, 1935	President	Operated by water users.
67	(Newell) Belle Fourche-----	North Dakota-----	Jan. 23, 1906	Secretary	Secondary—Now in M.R.B.
68	Newlands-----	South Dakota-----	Sept. 8, 1916	Congress	City water supply fund established.
	Newton-----	Nevada-----	Mar. 14, 1903	Secretary	Operated by water users.
	(North Dakota Pumping)-----	Utah-----	Oct. 17, 1940	President	Do.
69	North Platte (Sweetwater)-----	North Dakota-----	Jan. 23, 1906	Secretary	Williston, Buford-Trenton and Nesson.
		Wyoming-----	Mar. 14, 1903	Do.	Operated by water users and United States (R.&B.).
		Nebraska-----			
70	Ochoco-----	Oregon-----	June 29, 1948	Congress	Operated by water users.
71	Ogden River-----	Utah-----	Nov. 16, 1935	President	Do.
72	Okanogan-----	Washington-----	Dec. 2, 1905	Secretary	Operated by water users (R.&B.).
73	Oreland-----	California-----	Oct. 5, 1907	Do.	Do.
74	Owyhee-----	Oregon-Idaho-----	Oct. 12, 1926	President	Do.
75	Palisades-----	Idaho-Wyoming-----	Dec. 9, 1941	Secretary	Construction. Operated by United States. Reauthorized Sept. 30, 1950.
76	Palo Verde Diversion-----	California-Arizona-----	Aug. 31, 1954	Congress	Construction.
77	(Parker Dam Power) Parker-Davis-----	Colorado-----	Mar. 18, 1939	President	Operated by water users and United States.
78	Parker-Davis-----	Arizona-California-----	Aug. 30, 1935	Congress	Combined with Davis Dam May 28, 1954.
		Nevada-----	May 28, 1954	Do.	Construction. Operated by United States.
79	Pine River-----	Colorado-----	June 17, 1937	President	Operated by water users and United States (D.&M.C.).
80	Preston Bench-----	Idaho-----	June 15, 1948	Congress	Operated by water users.
81	Provo River-----	Utah-----	Nov. 16, 1935	President	Construction. Operated by water users and United States.
82	Rapid Valley-----	South Dakota-----	Nov. 8, 1939	Do.	Operated by water users and United States.

Number	Project	State	Authorization		Status in fiscal year 1957
			Date	Authority	
83	Rathdrum Prairie: Post Falls-----	Idaho-----	Jan. 29, 1944	Do.	Operated by water users.
84*	Hayden Lake-----	Do-----	June 9, 1947	Secretary	Construction. Operated by water users.
85	Red Bluff-----	Texas-----	June 18, 1926	Congress	W.P.A.-built and operated by water users.
	Rio Grande-----	Do-----	Dec. 2, 1905	Secretary	Operated by United States (D.&M.C.).
	(Rio Grande River Rectification)	New Mexico.			
		Texas-----	Aug. 29, 1935	Congress	P.W.A. funds of State Department.
86	Riverton-----	Wyoming-----	June 5, 1920	Do.	Operated by water users and United States (D.&M.C.) (R.&B.)
87	Rogue River, Talent Division.	Oregon-----	Aug. 20, 1954	Do.	Construction. (R.&B.).
	(Saco Divide) Milk River.	Montana-----	Apr. 11, 1941	President	Not constructed—Now in M.R.B.
	(St. Mary Storage) Milk River.	Do-----	Mar. 25, 1905	Secretary	Provisional. Approved January 15, 1906.
	(Salt Lake Basin-1) Weber River.	Utah-----	Jan. 8, 1927	President	Name changed November 6, 1935.
88	(Salt Lake Basin-2) Hyrum-----	Do-----	Sept. 18, 1933	Do.	Name changed November 6, 1935.
	Salt River-----	Arizona-----	Mar. 14, 1903	Secretary	Operated by water users (R.&B.).
	(San Diego)	California-----	Nov. 29, 1944	President	Constructed for Navy Department.
89	(San Diego Aqueduct) San Diego.	Do-----	Do.	Do.	Same as San Diego Project.
	San Luis Valley-----	Colorado-----	Feb. 1, 1940	Secretary	Operated by water users and United States.
90	Sanpete-----	Utah-----	Nov. 6, 1935	President	Operated by water users.
91	(Santa Barbara) Cachuma-----	California-----	Mar. 4, 1948	Secretary	Name changed.
92	Santa Margarita-----	Do-----	July 28, 1954	Congress	Not yet under construction.
	Santa Maria-----	Do-----	Sept. 3, 1954	Do.	Construction.
93	(Savage Rapids Dam) Grants Pass.	Oregon-----	July 9, 1952	Do.	Construction. Operated by water users.
94	Scofield-----	Utah-----	June 24, 1943	President	Operated by water users.
	Shoshone-----	Wyoming-----	Feb. 10, 1904	Secretary	Construction. Operated by water users and United States.
95	Solano-----	Montana-----	Nov. 11, 1948	Do.	Construction.
	(Stanfield) Umatilla-----	California-----	Sept. 8, 1933	Do.	N.I.R.A. funds approved.
96	Strawberry Valley-----	Oregon-----	Dec. 15, 1905	Do.	Operated by water users.
97	Sun River-----	Montana-----	Feb. 26, 1906	Do.	Operated by water users (D.&M.C.).
	(Sunnyside) Yakima-----	Washington-----	Dec. 12, 1905	Do.	Division of Yakima Project.
	(Sweetwater) North Platte-----	Wyoming-----	Mar. 14, 1903	Do.	Part of North Platte Project.
	(Teton) Yakima-----	Washington-----	Dec. 12, 1905	Do.	Division of Yakima Project.
	(Truckee-Carson) Newlands-----	Nevada-----	Mar. 14, 1903	Do.	Name changed 1919.
98	Truckee-Carson-----	Nevada-California.	Sept. 21, 1935	President	Operated by water users.
99	Tuacumcarl-----	New Mexico-----	Aug. 2, 1937	Congress	Do.
100	Umatilla-----	Oregon-----	Dec. 4, 1905	Secretary	Operated by water users and United States (R.&B.).
101	Uncompagnre (Gunnison)-----	Colorado-----	Mar. 14, 1903	Do.	Operated by water users.
	(Upper Snake River) Minidoka.	Idaho-----	Sept. 20, 1935	President	Division of Minidoka Project.

102	Vale	Oregon	Oct. 21, 1926	Do.	Operated by water users.
103*	Valley Gravity	Texas	June 28, 1941	Congress	Construction not undertaken.
104	Ventura River	California	Mar. 1, 1956	Do.	Construction.
105	Vermejo	New Mexico	Sep. 27, 1950	Do.	Operated by water users (D.&M.C.).
	(W. C. Austin) Austin, W. C.	Oklahoma	June 28, 1938	Do.	See Austin, W. C.
106	Wapinitia	Washington	June 16, 1906	Secretary	Pursuant act of March 6, 1906.
107	Wapinitia, Junior Division	Oregon	June 4, 1956	Congress	Not yet under construction.
108	Washita River Basin	Oklahoma	Feb. 25, 1956	Do.	Construction.
109	Weber Basin	Utah	Aug. 29, 1949	Do.	Construction. Operated by United States.
	Weber River (Salt Lake Basin)	Do.	Jan. 8, 1927	President	Operated by water users.
110*	Williston	North Dakota	Jan. 23, 1906	Secretary	Abandoned May 26, 1926.
	(Wind River-Indian) Riverton	Wyoming	May 28, 1918	Congress	Changed to Reclamation (Riverton) June 5, 1920.
111	Yakima	Washington	Dec. 12, 1905	Secretary	Construction. Operated by water users and United States.
	(Yakima-Kennewick) Yakima	Do.	June 12, 1948	Congress	Division of Yakima Project.
112	Yuma	Arizona-California	May 10, 1904	Secretary	Operated by water users and United States.
113	Yuma Auxiliary	Arizona	Jan. 25, 1917	Congress	Construction. Operated by water users and United States.

Approved in fiscal year 1957

114	Crooked River	Oregon	Aug. 6, 1956	Congress	Approved.
115	Little Wood River	Idaho	Do.	Do.	Do.
116	Washoe	Nevada-California	Aug. 1, 1956	Do.	Do.

* Inactive or abandoned projects (15).

D.&M.C.—Drainage and minor construction.

NOTE: (1) Except as noted by parentheses, this list includes as numbered items all original authorizations for construction by the Bureau of Reclamation, or Reclamation Service, with the date and source of the original authorization. Where projects have been authorized by more than one method, i.e., Secretary or President or act of Congress, only the first or earliest method is shown. Reauthorization or additional authorizations for the same project, or for new divisions or units of a previously authorized project, are not included. Where a project has been reauthorized, with all construction performed under the subsequent reauthorization, the original authorization is shown. Included are some projects on which no construction has been actually performed. Projects or works constructed for other agencies under the Economy Act, for which there is no direct authorization to the Bureau of Reclamation, are not included.

(2) Parentheses indicate superseded names, names of project divisions which are tabulated elsewhere in listing, and projects constructed for other agencies.

R.&B.—Rehabilitation and betterment.

M.R.B.—Missouri River Basin project.

*Annual authorizations for reclamation project construction
through fiscal year 1957*

Fiscal year	Project ¹	State	Authorization	
			Action ²	Date
1903	Milk River, First Unit.....	Montana.....	Authorized by Secretary..	Mar. 14, 1903
	Newlands (Truckee).....	Nevada.....	Do.....	Do.
	North Platte (Sweetwater).....	Wyoming.....	Do.....	Do.
	Salt River.....	Arizona.....	Do.....	Do.
	Uncompahgre (Gunnison).....	Colorado.....	Do.....	Do.
1904	Belle Fourche.....	South Dakota.....	Do.....	May 10, 1904
	Hondo.....	New Mexico.....	Do.....	Nov. 10, 1903
	Lower Yellowstone (Ft. Buford).....	North Dakota-Montana.....	Do.....	May 10, 1904
	Malheur.....	Oregon.....	Do.....	May 11, 1904
	Minidoka.....	Idaho.....	Do.....	Apr. 23, 1904
	North Platte, Pathfinder Dam.....	Wyoming.....	Do.....	May 3, 1904
	Shoshone (Cody).....	Do.....	Do.....	Feb. 10, 1904
	Uncompahgre Valley.....	Colorado.....	Do.....	June 7, 1904
	Yuma.....	Arizona-California.....	Do.....	May 10, 1904
1905	Bismarck (tentative).....	North Dakota.....	Do.....	Nov. 18, 1904
	Payette-Boise.....	Idaho.....	Do.....	Mar. 27, 1905
	Buford-Trenton (tentative).....	North Dakota.....	Do.....	Nov. 18, 1904
	Huntley.....	Montana.....	Do.....	Apr. 18, 1905
	Klamath.....	Oregon-California.....	Do.....	May 15, 1905
	Milk River, St. Mary (provisional).....	Montana.....	Reauthorized by Secretary	Mar. 25, 1905
	Palouse.....	Washington.....	Authorized by Secretary..	Nov. 14, 1904
1906	Buford-Trenton (Missouri-North Dakota Pumping).....	North Dakota.....	Do.....	Jan. 23, 1906
	Carlsbad.....	New Mexico.....	Do.....	Nov. 28, 1905
	Garden City ³	Kansas.....	Do.....	Oct. 5, 1905
	Milk River, St. Mary (final).....	Montana.....	Do.....	Jan. 15, 1906
	Nesson (North Dakota Pumping).....	North Dakota.....	Do.....	Jan. 23, 1906
	Okanogan.....	Washington.....	Do.....	Dec. 2, 1905
	Rio Grande, Leasburg Dam.....	New Mexico-Texas.....	Do.....	Do.
	Salt River, Arizona Dam.....	Arizona.....	Do.....	Jan. 13, 1906
	Strawberry Valley.....	Utah.....	Do.....	Dec. 15, 1905
	Sun River.....	Montana.....	Do.....	Feb. 26, 1906
	Umatilla.....	Oregon.....	Do.....	Dec. 4, 1905
	Williston (Missouri-North Dakota Pumping).....	North Dakota.....	Do.....	Jan. 23, 1906
	Yakima, Sunnyside Division.....	Washington.....	Do.....	Dec. 12, 1905
	Yakima, Tieton Division.....	Do.....	Do.....	Do.
	Yakima, Wapato-Indian Division.....	Do.....	Do, pursuant to act of Congress.	June 16, 1906
				Mar. 6, 1906
1907	Blackfeet-Indian.....	Montana.....	Indian Appropriation Act.	Mar. 1, 1907
	Blackfeet-Indian (construction by Reclamation).....	Do.....	Authorized by Secretary..	June 28, 1907
	Orland (conditional).....	California.....	Do.....	Dec. 18, 1906
1908	Flathead-Indian.....	Montana.....	Indian Appropriation Act.	Apr. 30, 1908
	Fort Peck-Indian.....	Do.....	Act of Congress.	May 30, 1908
	Orland.....	California.....	Authorized by Secretary..	Oct. 5, 1907
1909	None.			
1910	None.			
1911	Belle Fourche.....	South Dakota.....	Reapproved by President.	Jan. 5, 1911
	Boise.....	Idaho.....	Do.....	Do.
	Buford-Trenton.....	North Dakota.....	Do.....	Do.
	Carlsbad.....	New Mexico.....	Do.....	Do.
	Garden City.....	Kansas.....	Do.....	Do.
	Grand Valley.....	Colorado.....	Approved by President.	Do.
	Hondo.....	New Mexico.....	Reapproved by President.	Do.
	Huntley.....	Montana.....	Do.....	Do.
	Klamath.....	Oregon-California.....	Do.....	Do.
	Lower Yellowstone.....	North Dakota-Montana.....	Do.....	Do.
		Montana.....		
	Milk River and St. Mary.....	Montana.....	Do.....	Do.
	Minidoka.....	Idaho.....	Do.....	Do.
	Newlands (Truckee-Carson).....	Nevada.....	Do.....	Do.
	North Platte.....	Nebraska.....	Do.....	Do.
		Wyoming.....		

SUMMARY TABULATIONS

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Fiscal year	Project ¹	State	Authorization	
			Action ²	Date
	Okanogan.....	Washington.....	Do.....	Do.
	Orland.....	California.....	Do.....	Do.
	Rio Grande and Leasburg.....	Texas.....	Do.....	Do.
	Salt River.....	Arizona.....	Do.....	Do.
	Shoshone.....	Wyoming.....	Do.....	Do.
	Strawberry Valley.....	Utah.....	Do.....	Do.
	Sun River.....	Montana.....	Do.....	Do.
	Umatilla.....	Oregon.....	Do.....	Do.
	Uncompahgre.....	Colorado.....	Do.....	Do.
	Williston.....	North Dakota.....	Do.....	Do.
	Yakima.....	Washington.....	Do.....	Do.
	Yuma.....	Arizona-California.....	Do.....	Do.
	Boise, Arrowrock Dam.....	Idaho.....	Approved by Secretary..	Jan. 6, 1911
1912	None.			
1913	None.			
1914	None.			
1915	Lawton.....	Oklahoma.....	Approved by President..	Oct. 8, 1914
1916	None.			
1917	Newell water system	South Dakota.....	Act of Congress.....	Sept. 8, 1916
	Yuma Auxiliary.....	Arizona.....	Do.....	Jan. 25, 1917
1918	King Hill.....	Idaho.....	Approved by Secretary.. per act of Congress.....	July 2, 1917 June 12, 1917
1919	None.			
1920	Riverton (to Reclamation)....	Wyoming.....	Appropriation Act.....	June 5, 1920
1921	None.			
1922	None.			
1923	None.			
1924	None.			
1925	Colorado River Front Work and Levee System.	Arizona-California- Nevada.	Rivers and Harbors Act..	Mar. 3, 1925
	North Platte, Guernsey Dam..	Nebraska- Wyoming.	Approved by President..	Apr. 30, 1925
1926	Red Bluff.....	Texas.....	Act of Congress.....	June 18, 1926
1927	Colorado River Front Work and Levee System.	Arizona-California- Nevada.	Rivers and Harbors Act..	Jan. 21, 1927
	Owyhee.....	Oregon-Idaho.....	Approved by President..	Oct. 12, 1926
	Vale.....	Oregon.....	Do.....	Oct. 21, 1926
	Weber River (Salt Lake Basin, First Division).	Utah.....	Do.....	Jan. 8, 1927
1928	None.			
1929	Boulder Canyon, Hoover Dam and All-American Canal System.	Arizona-California- Nevada.	Act of Congress.....	Dec. 21, 1928
	Boise, Deadwood Dam.....	Idaho.....	Approved by President..	Oct. 19, 1928
	Minidoka, Gooding Division..	Do.....	Do.....	July 3, 1928
1930	None.			
1931	Baker.....	Oregon.....	Approved by President..	Mar. 18, 1931
	Bitter Root.....	Montana.....	Act of Congress.....	July 3, 1930
	Bitter Root (required report) ..	Do.....	F.F. by Secretary to Con- gress.	Nov. 25, 1930
	Yakima, Kennewick Highlands	Washington.....	Approved by President..	Mar. 7, 1931
1932	None.			
1933	None.			

Fiscal year	Project ¹	State	Authorization	
			Action ²	Date
1934	Hyrum (Salt Lake Basin, Cache Valley).	Utah.....	Do.....	Sept. 18, 1933
1935	None			
1936	Boise, Payette Division	Idaho.....	Do.....	Dec. 19, 1935
	Burnt River	Oregon.....	Recommended by Secretary.	Sept. 25, 1935 ³
	Carlsbad, Alamogordo Reservoir.	New Mexico.....	Approved by President..	Nov. 6, 1935 ³
	Central Valley, initial plan	California.....	Do.....	Dec. 2, 1935
	Columbia Basin, Grand Coulee Dam.	Washington.....	Act of Congress.....	Aug. 30, 1935 ³
	Frenchtown	Montana.....	Approved by President..	Sept. 21, 1935
	Humboldt.	Nevada.....	Do.....	Nov. 6, 1935 ³
	Hyrum	Utah.....	Reapproved by President	Do.
	Kendrick, (Casper-Alcova)	Wyoming.....	Approved by President..	Aug. 30, 1935 ³
	Milk River, Fresno (Chain Lakes).	Montana.....	Do.....	Aug. , 1935
	Minidoka, (Upper Snake) Storage Division.	Idaho.....	Do.....	(Undated) Sept. 20, 1935
	Moon Lake	Utah.....	Do.....	Nov. 6, 1935 ³
	Ogden River	Do.....	Do.....	Nov. 16, 1935 ³
	Parker Dam	Arizona-California.	Act of Congress.....	Aug. 30, 1935
	Provo River	Utah.....	Approved by President..	Nov. 16, 1935
	Rio Grande, Canalization	Texas.....	Acts of Congress.....	(Aug. 29, 1935)
	Rio Grande, Caballo Dam	New Mexico.....	Do.....	June 4, 1936
	Sanpete	Utah.....	Approved by President..	Nov. 6, 1935 ³
	Truckee Storage	California-Nevada.	Do.....	Sept. 21, 1935
	Uncompahgre, Rehabilitation and Taylor Park Dam.	Colorado.....	Do.....	Nov. 6, 1935
	Yakima, Roza Division	Washington.....	Do.....	Do.
1937	Gila	Arizona.....	Do.....	June 21, 1937 ³
	Pine River	Colorado.....	Do.....	June 17, 1937
1938	W. C. Austin, Lugert-Altus Reservoir.	Oklahoma.....	Rivers and Harbors Act.	June 28, 1938
	Buffalo Rapids, First Division	Montana.....	Approved by President..	Sept. 27, 1937
	Central Valley	California.....	Reauthorized by Rivers and Harbors Act.	Aug. 26, 1937
	Colorado-Big Thompson (full power).	Colorado.....	Approved by President..	Dec. 21, 1937
	Colorado River, Marshall Ford Dam.	Texas.....	Rivers and Harbors Act.	Aug. 26, 1937
	Deschutes, North Unit.	Oregon.....	Approved by President..	Nov. 1, 1937
	Fort Peck (completion)	Montana-North Dakota.	Act of Congress.....	May 18, 1938
	Fruitgrowers Dam	Colorado.....	Approved by President..	Jan. 11, 1938
	Rio Grande, power	Texas.....	Act of Congress.....	Aug. 9, 1937
	Tucumcari (Arch Hurley)	New Mexico.....	Do.....	Aug. 2, 1937
1939	Paonia	Colorado.....	Approved by President..	Mar. 18, 1939
	Parker Dam Power	Arizona-California.	Appropriation Act.....	May 2, 1939
	Provo River, Aqueduct Division.	Utah.....	Approved by President..	Oct. 24, 1938
	Tucumcari (Arch Hurley)	New Mexico.....	Do.....	Nov. 1, 1938
	W.C.U. projects in Great Plains.	Various.....	Pursuant to Act..... Appropriation Act.....	Apr. 9, 1938 May 10, 1939
1940	Bismarck	North Dakota.....	Approved by President..	Apr. 26, 1940
	Boise, Anderson Ranch Dam (see 1941).	Idaho.....	F.F. by Secretary to President.	June 25, 1940
	Buffalo Rapids, First Division enlargement.	Montana.....	Approved by President..	May 15, 1940
	Buffalo Rapids, Second Division.	Do.....	Do.....	Oct. 11, 1939
	Buffalo Rapids, Second Division enlargement.	Do.....	Do.....	May 15, 1940
	Buford-Trenton	North Dakota.....	Do.....	Sept. 23, 1939
	Kings River	California.....	F.F. by Secretary to President.	Jan. 24, 1940
	Do.....	Do.....	F.F. by Secretary to Congress.	Feb. 10, 1940
	Mirage Flats	Nebraska.....	Approved by President..	Apr. 26, 1940
	Rapid Valley	South Dakota.....	Do.....	Nov. 8, 1939

Fiscal year	Project ¹	State	Authorization	
			Action ²	Date
1941	San Luis Valley	Colorado	F.F. by Secretary to President.	Feb. 1, 1940
			F.F. by Secretary to Congress.	Apr. 10, 1940
	W.C.U. projects (Wheeler-Case)	Various	Act of Congress	Aug. 11, 1939
	Angostura	South Dakota	Approved by President.	Mar. 6, 1941
	W. C. Austin (Altus)	Oklahoma	Do	Feb. 13, 1941
	Boise, Anderson Ranch Dam	Idaho	F.F. by Secretary to Congress.	Aug. 12, 1940
	Boulder Canyon, adjustment	Arizona-Nevada	Act of Congress	July 19, 1940
	Central Valley	California	Reauthorized by Rivers and Harbors Act.	Oct. 17, 1940
	Colorado River Front Work and Levee System.	Arizona-California-Nevada.	Amended Act of Congress.	July 1, 1940
	Davis Dam (Bullshead)	Arizona-Nevada	F.F. by Secretary to President.	Apr. 7, 1941
	Do	Do	F.F. by Secretary to Congress.	Apr. 26, 1941
	Eden	Wyoming	Approved by President.	Sept. 18, 1940
	Mancos	Colorado	Do	Oct. 24, 1940
	Milk River, Saco Divide Unit.	Montana	Do	Apr. 11, 1941
1942	Newton	Utah	Do	Oct. 17, 1940
	Rapid Valley	South Dakota	Do	Oct. 25, 1940
	Valley Gravity	Texas	Appropriation Act.	June 28, 1941
	W.C.U. projects, amended	Various	Act of Congress	Oct. 14, 1940
	Mann Creek	Idaho	Approved by President.	July 7, 1941
	Palisades	Do	F.F. by Secretary to Congress.	Dec. 9, 1941
	Rapid Valley (revision)	South Dakota	Approved by President.	June 5, 1942
	Buford-Trenton, enlargement.	North Dakota	Do	Aug. 7, 1942
	Columbia Basin, high dam	Washington	Reauthorized by Congress.	Mar. 10, 1943
	Scotfield	Utah	Approved by President.	June 24, 1943
	Baltomhea	Texas	Do	Apr. 15, 1944
	Bitterroot Valley, Woodside	Montana	Do	Mar. 22, 1944
	Hungry Horse, high dam	Do	Act of Congress	June 5, 1944
	Intake	Do	Approved by President.	Jan. 20, 1944
1943	Milk River, Dodson Pumping Unit.	Do	Do	Mar. 17, 1944
	Missoula Valley	Do	Do	May 10, 1944
	Newton, completion	Utah	Do	Aug. 31, 1943
	Rapid Valley, Deerfield Unit, completion.	South Dakota	Do	Nov. 22, 1943
	Rathdrum Prairie, Post Falls Unit.	Idaho	Do	Jan. 29, 1944
	W.C.U. projects, amended	Various	Act of Congress	July 16, 1943
	Mancos, expansion	Colorado	Approved by President.	Dec. 20, 1944
	Mirage Flats, completion	Nebraska	Do	Mar. 22, 1944
	Missouri River Basin, initial stages.	10 States	Rivers and Harbors Act.	Dec. 22, 1944
	Rathdrum Prairie, Post Falls Unit.	Idaho	Reapproved by President.	Feb. 24, 1945
	San Diego, plans by Reclamation.	California	Approved by President.	Nov. 29, 1944
	Shoshone, Heart Mountain Power.	Wyoming	F.F. by Secretary to President.	June 19, 1945
	Shoshone, Heart Mountain Power.	Do	F.F. by Secretary to Congress.	Aug. 31, 1945
	Colorado River Front Work and Levee System.	Arizona-California-Nevada.	Act of Congress, amended.	June 28, 1946
1944	Lewiston Orchards	Idaho	Act of Congress	July 31, 1946
	Missouri River Basin, comprehensive plan.	10 States	Flood Control Act.	July 24, 1946
	Paonia, reauthorization	Colorado	Act of Congress	June 25, 1947
	Rathdrum Prairie, Hayden Lake.	Idaho	F.F. by Secretary to President.	June 9, 1947
1945	Arnold	Oregon	Appropriation Act.	July 25, 1947
	Do, additional funds	Do	Appropriation Act.	Dec. 23, 1947

Fiscal year	Project ¹	State	Authorization	
			Action ²	Date
1949	Boulder Canyon: All-American Canal, flood works.	California-----	F.F. by Secretary to President.	July 22, 1947
	All-American Canal, flood works.	Do-----	F.F. by Secretary to Congress.	July 24, 1947
	Cachuma (Santa Barbara)-----	Do-----	F.F. by Secretary to President.	Mar. 4, 1948
	Do-----	Do-----	F.F. by Secretary to Congress.	Mar. 24, 1948
	Gila, Wellton-Mohawk, relocation.	Arizona-----	Act of Congress-----	July 30, 1947
	Ochoco-----	Oregon-----	Appropriation Act-----	June 29, 1948
	Preston Bench-----	Idaho-----	Act of Congress-----	June 15, 1948
	Rathdrum Prairie, Hayden Lake.	Do-----	F.F. by Secretary to Congress.	July 7, 1947
	Yakima, Kennewick Division.	Washington-----	Act of Congress-----	June 12, 1948
	Middle Rio Grande-----	New Mexico-----	Flood Control Act-----	June 30, 1948
	Provo River, continuation-----	Utah-----	Act of Congress-----	Mar. 29, 1948
	Columbia Basin, additional capacity.	Washington-----	F.F. by Secretary to President.	Jan. 5, 1949
	Columbia Basin, additional capacity.	Do-----	F.F. by Secretary to Congress.	Feb. 8, 1949
	Eden, completion-----	Wyoming-----	Act of Congress-----	June 28, 1949
	San Luis Valley, Platoro Unit.	Colorado-----	F.F. by Secretary to President.	Mar. 7, 1949
	Do-----	Do-----	F.F. by Secretary to Congress.	Mar. 31, 1949
	Solano-----	California-----	F.F. by Secretary to President.	Nov. 11, 1948
	Do-----	Do-----	F.F. by Secretary to Congress.	Jan. 28, 1949
1950	Arnold, additional funds-----	Oregon-----	Appropriation Act-----	Oct. 12, 1949
	Buffalo Rapids, completion-----	Montana-----	Act of Congress-----	Oct. 10, 1949
	Central Valley, American River Division.	California-----	Do-----	Oct. 14, 1949
	Fort Sumner-----	New Mexico-----	Do-----	July 29, 1949
	Grants Pass, Northwest pipeline.	Oregon-----	Appropriation Act-----	Oct. 12, 1949
	Kendrick, Alcova power plant.	Wyoming-----	F.F. by Secretary to President.	Sept. 20, 1949
	Middle Rio Grande, completion.	New Mexico-----	Flood Control Act-----	May 17, 1950
	Missouri River Basin, additional funds.	10 States-----	Do-----	Do.
	Ochoco, additional funds-----	Oregon-----	Appropriation Act-----	Oct. 12, 1949
	Weber Basin-----	Utah-----	Act of Congress-----	Aug. 29, 1949
1951	Colorado River Front Work and Levee System, cost credits.	Arizona-California-Nevada.	Do-----	Sept. 2, 1950
	Canadian River-----	Texas-----	Do-----	Dec. 29, 1950
	Central Valley, Sacramento Canals.	California-----	Do-----	Sept. 26, 1950
	Eklutna-----	Alaska-----	Do-----	July 31, 1950
	Kendrick, Alcova power plant.	Wyoming-----	F.F. by Secretary to Congress.	Aug. 22, 1950
	Middle Rio Grande, emergency funds.	New Mexico-----	Approved by President..	May 23, 1951
	Minidoka, American Falls Power Division.	Idaho-----	Act of Congress-----	Sept. 30, 1950
	Minidoka, North Side Pumping Division.	Do-----	Do-----	Do.
	Palisades (reauthorized)-----	Do-----	Do-----	Do.
	Vermejo-----	New Mexico-----	Do-----	Sept. 27, 1950
	Vermejo (required by above act).	Do-----	Approved by President..	June 22, 1951
	Provo River, Deer Creek power plant.	Utah-----	F.F. by Secretary to President.	Aug. 20, 1951
1952	San Diego, second barrel-----	California-----	Act of Congress-----	Oct. 11, 1951
	Vermejo-----	New Mexico-----	Amended act of Congress.	Mar. 5, 1952
1953	Central Valley, Trinity River Division.	California-----	F.F. by Secretary to President.	Dec. 9, 1952

SUMMARY TABULATIONS

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Fiscal year	Project ¹	State	Authorization	
			Action ²	Date
1954	Central Valley, Trinity River Division.	Do	F.F. by Secretary to Congress.	Jan. 2, 1953
	Central Valley, Sacramento Canals Division.	Do	F.F. by Secretary to Congress.	Jan. 19, 1953
	Collbran	Colorado	Pursuant act of Congress.	Sept. 26, 1950
	Grants Pass, Savage Rapids Dam.	Oregon	Act of Congress	July 3, 1952
	Provo River, Deer Creek power plant.	Utah	Appropriation Act	July 9, 1952
			F.F. by Secretary to Congress.	Sept. 10, 1952
	Avondale	Idaho	Appropriation Act	July 31, 1953
	Dalton Gardens	Do	Do	Do.
	Eklutna	Alaska	Amended act of Congress.	Aug. 13, 1953
	Falcon	Texas	Act of Congress	June 18, 1954
1955	Parker-Davis, consolidation.	Arizona-California-Nevada.	Do	May 28, 1954
	Avondale, additional funds.	Idaho	Appropriation Act	July 1, 1954
	Carlsbad, Alamogordo Spillway.	New Mexico	Do	Do.
	Chief Joseph Dam, Foster Creek.	Washington	Act of Congress	June 27, 1954
	Crescent Lake Dam.	Oregon	Appropriation Act	July 1, 1954
	Deschutes, Haystack Dam	Do	Act of Congress	Aug. 10, 1954
	Michaud Flats	Idaho	Do	Aug. 31, 1954
	Missouri River Basin, Glendo Unit.	Wyoming	Do	July 16, 1954
	Missouri River Basin:			
	Ainsworth Unit	Nebraska	Do	Aug. 21, 1954
1956	Lavaca Flats Unit	Do	Do	Do.
	Mirage Flats Extension Unit.	Do	Do	Do.
	O'Neill Unit	Do	Do	Do.
	Palo Verde Diversion.	California-Arizona.	Do	Aug. 31, 1954
	Rogue River Basin, Talent Division.	Oregon	Do	Aug. 20, 1954
	Santa Margarita	California	Do	July 28, 1954
	Santa Maria	Do	Do	Sept. 3, 1954
	Central Valley, Trinity River	Do	Do	Aug. 12, 1955
	Colorado River Storage and Participating.	Various	Do	Apr. 11, 1956
	Gila, Yuma Mesa Irrigation	Arizona	Do	Jan. 28, 1956
1957	Missouri River Basin:			
	Ainsworth Unit	Nebraska	Do	May 18, 1956
	Ventura River	California	Do	Mar. 1, 1956
	Wapinitia, Juniper Division.	Oregon	Do	June 4, 1956
	Washita River Basin	Oklahoma	Do	Feb. 25, 1956
	Crooked River	Oregon	Do	Aug. 6, 1956
	Grants Pass, Savage Rapids Dam, fish protective facilities.	Do	Appropriation Act	July 2, 1956
	Little Wood River	Idaho	Act of Congress	Aug. 6, 1956
	Missouri River Basin:			
	Farwell Unit	Nebraska	Do	Aug. 3, 1956
1958	Rathdrum Prairie, Hayden Lake.	Idaho	Appropriation Act	July 2, 1956
	Washoe	Nevada-California.	Act of Congress	Aug. 1, 1956

F.F.—Finding of Feasibility.

W.C.U.—Water Conservation and Utility.

¹ Original name indicated by parentheses.² Prior approval of construction with emergency relief funds not included because subsequent Parker Dam decision required regular Presidential authorization.³ September 16, 1905, action rescinded September 18, 1905.



PROJECT
FEASIBILITIES
AND
AUTHORIZATIONS



ARNOLD PROJECT

OREGON

The Arnold project was originally included in the Deschutes project. Funds for the emergency rehabilitation of the works of the Arnold Irrigation District were provided in the Interior Department Appropriation Act, 1948 (Act of July 25, 1947, 61 Stat. 460, Public Law 247, 80th Cong., 1st sess.). Funds were provided without a finding of feasibility.

Additional funds were provided by the Third Supplemental Appropriation Act, 1948 (Act of December 23, 1947, 61 Stat. 941, Public Law 393, 80th Cong. 1st sess.) and the Interior Department Appropriation Act, 1950 (Act of October 12, 1949, 63 Stat. 765, Public Law 350, 81st Cong. 1st sess.).

PROVISIONS OF INTERIOR DEPARTMENT APPROPRIATION ACTS

[Extract from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1948, and for other purposes. (Act of July 25, 1947, 61 Stat. 460, 473, Public Law 247, 80th Cong., 1st sess.)

* * * * *

Construction: For construction and continuation of construction of the following projects in not to exceed the following amounts, all to be reimbursable under the reclamation law, except as provided in the act of August 14, 1946 (Public Law 732), Seventy-ninth Congress, to remain available until expended for carrying out projects (including the construction of transmission lines) previously or herein authorized by Congress:

* * * * *

Deschutes project, Oregon, \$1,626,000, of which \$100,000 shall be available toward emergency rehabilitation of the works of the Arnold Irrigation District, to be repaid in full under conditions satisfactory to the Secretary of the Interior.

[Extract from] An act making supplemental appropriations for the fiscal year ending June 30, 1948, and for other purposes. (Act of December 23, 1947, 61 Stat. 941, 944, Public Law 393, 80th Cong., 1st sess.)

* * * * *

Reclamation Fund, Construction: For construction and continuation of construction of the following project in not to exceed the following amount to be reimbursable in full under conditions satisfactory to the Secretary of the Interior as provided in Public Law 247, 80th Congress, approved July 25, 1947:

* * * * *

Deschutes project, Oregon, \$72,000, to be available toward emergency rehabilitation of the works of the Arnold Irrigation District under the same terms and conditions as provided in said Public Law 247, 80th Congress.

[Extract from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1950, and for other purposes. (Act of October 12, 1949, 63 Stat. 765, 779, Public Law 350, 81st Cong., 1st sess.)

* * * * *

Construction: For construction and continuation of construction of the following projects in not to exceed the following amounts, all to be reimbursable (except as otherwise provided by law) under the reclamation law, to remain available until expended for carrying out projects (including the construction of transmission lines) previously or herein authorized by Congress:

* * * * *

Deschutes project, Oregon, \$1,313,750, of which not to exceed \$35,150 shall be available toward emergency rehabilitation of the works of the Arnold Irrigation District, to be repaid in full under conditions satisfactory to the Secretary of the Interior, * * *

W. C. AUSTIN PROJECT

OKLAHOMA

The W. C. Austin project was initiated as the Lugert-Altus project (or Altus project) under the provisions of the Rivers and Harbors Act of June 28, 1938 (52 Stat. 1215, 1219), found feasible by the Secretary on January 21, 1941, pursuant to section 4 of the Act of June 25, 1910 (36 Stat. 836) and subsection B of section 4 of the Act of December 5, 1924 (43 Stat. 702). The name of the Lugert-Altus project was changed to W. C. Austin project by congressional action, April 16, 1947 (61 Stat. 99, Public Law 69, 80th Cong.).

AUTHORIZED BY SPECIAL PROVISIONS IN RIVERS AND HARBORS ACT, 1938

[Extract from] An act authorizing the construction of certain public works on rivers and harbors for flood control, and for other purposes. (Act of June 28, 1938, 52 Stat. 1215, 1219, Public Law 761, 75th Cong., 3d sess.)

Red River Basin: The Denison Reservoir on Red River in Texas and Oklahoma for flood control and other purposes as described in House Document Numbered 541, Seventy-fifth Congress, third session, with such modifications thereof as in the discretion of the Secretary of War and the Chief of Engineers may be advisable, is adopted and authorized at an estimated cost of \$54,000,000: *Provided*, That in the consideration of benefits in connection with the Denison Reservoir all benefits that can be assigned to the proposed Altus project and other such projects in Oklahoma shall be reserved for said projects.

The Lugert-Altus Flood Control and Reclamation Reservoir located on the North Fork of the Red River in Oklahoma, is hereby authorized for construction at an estimated cost of \$2,497,000, on the following basis as to a division of the cost of construction:

(a) The Chief of Engineers shall report to the President on or before November 1, 1938, the value of said Lugert Reservoir as a flood control works, and the value so reported shall be the maximum amount herein authorized to be appropriated as a charge against any funds appropriated and available for the construction for flood control projects.

(b) The remainder of the estimated cost of such Lugert Reservoir,

namely, the estimated total cost of the reservoir, less the amount reported by the Chief of Engineers as the value of said reservoir as a flood control project, is also hereby authorized to be appropriated out of the special fund in the Treasury of the United States created by the Act of June 17, 1902 (43 U. S. C. 391, 411), and therein designated "the reclamation fund" for the construction of said Lugert Reservoir for reclamation and irrigation as reported in Senate Document Numbered 153, Seventy-fifth Congress, third session, and as further authorized by the last paragraph on page 37 of Public Act Numbered 497, Seventy-fifth Congress, third session, providing that the construction of said Lugert Reservoir and Altus reclamation project shall not be undertaken until the Chief of Engineers and the Secretary of the Interior join in an agreement as to the division of cost of the construction of the said reservoir as provided herein. (52 Stat. 1219.)

THE SECRETARY OF THE INTERIOR,
Washington, January 21, 1941.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: The Acts of June 25, 1910 (36 Stat. 835), and December 5, 1924 (43 Stat. 701), provide, in effect, that an irrigation project shall not be constructed by the Bureau of Reclamation under the Reclamation Law (1) until the Secretary of the Interior (a) has obtained detailed information concerning the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development of the project, and (b) has made a finding in writing that the project is feasible, is adaptable for actual settlement and farm homes and will probably return the cost thereof to the United States; and (2) until the project has been recommended for construction by the Secretary and approved by the President.

The Reclamation Project Act of 1939 (53 Stat. 1187), provides a somewhat different procedure to be followed in undertaking the construction of new projects, particularly new multiple-purpose projects. However, moneys were appropriated for the construction of the Altus project in the Interior Department Appropriation Act, 1940, approved on May 10, 1939 (53 Stat. 685). Under Section 7 of the Reclamation Project Act of 1939, it is therefore in the discretion of the Secretary of the Interior as to whether the new procedure shall be followed in connection with the Altus project. Since this project already has been authorized specially by the Act of June 28, 1938 (52 Stat. 1215, 1219), which makes special provisions for cooperation between the Chief of Engineers and this Department, it is advisable to proceed in conformity with the statutory provisions referred to in the preceding paragraph, for only under them can the special legislation for the project be carried into effect.

Accordingly, the following report on the Altus project in Greer, Kiowa, and Jackson Counties in southwestern Oklahoma is made to you in conformance with the provisions of the above cited acts of June 25, 1910, and December 5, 1924:

The lands to be benefited by the project surround the town of Altus and have been cultivated for many years, being largely homesteaded prior to 1890. The farms are well improved and, in years of favorable distribution of rainfall, good crops consisting principally of cotton, winter wheat, and grain sorghums are grown. Land values range from \$50 to \$100 per acre.

Crop yields are very poor in dry years, and during the recent drought heavy losses were suffered in the area due to crop failures and forced sale of livestock. Nearly 130,000 acres of arable land are available but the water supply is only sufficient for the irrigation of 20,000 acres in practically all years and an additional 50,000 acres about half of the time. If the irrigation project had been in existence the last thirty years, the average irrigated area would have been 47,000 acres. A water supply for the project can be obtained from the North Fork of the Red River. This stream derives its runoff from heavy rains on 2,560 square miles of watershed above Lugert, Oklahoma. The rate of runoff is highly variable, ranging from negligible amounts in the dry season to several thousand second-feet following intense rains. Storage is essential to the regulation of the variable runoff for irrigation purposes.

The principal features proposed to be constructed are a reservoir of 200,000 acre-feet capacity on the North Fork of the Red River at or near the site of an existing dam, about one mile west of Lugert; a main canal of 1,000 second-feet initial capacity reaching from the dam to the project lands; and a lateral and drainage system to serve 70,000 acres of land, extending from about four miles north of Blair to about eight miles south of Altus. Of the reservoir's capacity 163,000 acre-feet are to be reserved for irrigation and municipal purposes, 20,000 acre-feet for flood control, and 17,000 acre-feet of superstorage above flood control storage to pass extreme floods. The Lugert Dam is planned as a rock masonry structure having a maximum height of 100 feet, with earth-fill embankments extending approximately 500 feet from either end of the rock construction. About 18,000 feet of dike, with a maximum height of 40 feet, would be required on the east side of the reservoir. Sections of the Chicago, Rock Island, and Pacific Railroad and Oklahoma State Highway No. 9 in the reservoir site, each about $4\frac{1}{2}$ miles in length, would need to be relocated. The length of the main canal and its branch canals would be about forty miles.

The flow of the North Fork is now partially developed for municipal and other beneficial purposes by the city of Altus. Its system includes a channel storage reservoir (Lake Altus), having a capacity of about 4,900 acre-feet, and a pipeline capable of diverting 3,600 acre-feet annually. Future requirements for municipal purposes by the city of Altus are estimated at 4,800 acre-feet annually, which amount is sufficient for a population of 25,000,

about three times the present population. Allowance has been made in the water supply studies for this use ahead of irrigation diversions.

The total estimated cost of construction is \$5,600,000. This is divided approximately as follows:

Lugert dam and reservoir, including railroad and highway relocation	\$2,695,000
Main canals	1,198,000
Lateral system	770,000
Drainage system	700,000
Miscellaneous items	237,000

The estimated cost of the reservoir exceeds by about 8 percent the estimate appearing in the Act of June 28, 1938. The increase is due in part to a general price rise and in part to increased costs anticipated because of the use of Work Projects Administration Labor. It has been concluded that the increase is not unreasonable and that it raises no question of the authority to proceed.

Based on the experience of the Bureau of Reclamation on other projects, it is considered within the ability of the agricultural water users to repay \$2,000,000 of the construction cost in a period of forty years, in addition to paying operation and maintenance costs of \$70,000 annually. The Chief of Engineers of the War Department, in a manner concluded to be substantial compliance with the Act of June 28, 1938, *supra*, has determined the value of the reservoir as a flood control works to be \$1,130,000, and an agreement dividing the reservoir cost charging this amount to flood control has been reached. Participation by the city of Altus for delivery of water from the reservoir through the project main canal to the city is expected to be \$1,080,000. It is planned to secure non-reimbursable funds, in addition to the flood control funds, to the extent of at least \$1,390,000 by the participation of the Work Projects Administration to the extent of its existing authority or continuations of this authority, and to secure any part of this amount which can not be made available by that administration by means of Civilian Conservation Corps projects authorized under the Act of June 28, 1937 (50 Stat. 319), as extended. Considering the Civilian Conservation Corps program now being carried on in the Bureau of Reclamation and the fact that the authority to carry on Civilian Conservation Corps activities extends to July 1, 1943, I have concluded that there is reasonable assurance that the Civilian Conservation Corps program can be relied on to meet that part of this amount that the Work Projects Administration may be unable to supply because of its limited authority.

The sum of the amount which probably can be repaid by the water users (agricultural and city), the amount to be secured from flood control appropriations and the amount to be secured by means of Work Projects Administration or Civilian Conservation Corps projects, is equal to the estimated cost of construction of the entire Altus project.

On March 29, 1940, an election was held at Altus to vote on the

formation of the Lugert-Altus Irrigation District, which was carried by a vote of 333 to 42. District boundaries, as established by the Jackson County Commissioners on February 24, 1940, show a gross area of 80,000 acres of arable lands. Land classification will reduce this area to 70,000 acres of irrigable lands.

Pursuant to the authorization contained in the Interior Appropriation Act of 1939:

For cooperative investigations, including investigations in the so-called "Dust Bowl," in cooperation with the Corps of Engineers, the Farm Security Administration, and other Federal agencies, of irrigation, flood control, and resettlement possibilities of proposed projects, \$200,000, of which \$25,000 shall be available for the proposed Altus project, Oklahoma * * *

the Department of Agriculture made an investigation of the project and submitted a report on March 1939. The findings of that Department were essentially as follows:

Very little new land will be brought under cultivation, as a high percentage of the area is already in crops. Any advantage to be derived would come through increased production. The most profitable crops under irrigation would be much the same as under dry farming although a slight increase in cotton and alfalfa acreage might be expected. On approximately 21,000 acres in the project, the estimated income through the use of water would be great enough to constitute a decided advantage to the farms using it. On the remainder of the area considered for inclusion in the 70,000 acre project where the soils are heavy and the sub-soils slowly permeable, the incomes of the farmers would not be greatly improved over dry farming conditions. Opportunities for new settlers would be few and irrigation of the area does not offer much opportunity for the establishment of a resettlement project. Rainfall is sufficient to produce fairly good yields in most years and the supply of water for irrigation would often be short in the dry years when it would most be needed. Farm families in the area are not experienced in irrigation and would require some guidance in the handling of their irrigation problems.

The comments of the Bureau of Reclamation on this report are to the effect that only the better lands would be included in the project, that there would be minor shortages in the drier years, but that an average area of 47,000 acres would be irrigated, varying from approximately 20,000 acres in the drier years to 70,000 acres when the river flow is greater than normal. Both the Department of Agriculture and this Department are in agreement that each project farm should have a small, stable, irrigated area with the balance of the farm to be irrigated with secondary water to the extent available.

Based on the foregoing data and other information available to the Department concerning the proposed project, I find that it is feasible from an engineering standpoint, and that it is economically feasible provided nonreimbursable funds such as through the expected participation of the Work Projects Administration or the Civilian Conservation Corps, or both, on the basis above discussed, in addition to the flood control allocation, are made available in the amount of not less than \$1,390,000 of the present estimated cost. I find further that the project, already settled and developed, is adaptable to further stabilization and development through irrigation, and that the amounts to be expended from the

reclamation fund will probably be returned to the United States, together with such portion of the contributions by the Work Projects Administration and Civilian Conservation Corps as the Department determines the water users can reasonably be expected to repay, it now being expected on the basis of the present estimated costs of construction that all such contributions in excess of \$1,390,000 will be set up as repayable. Under the authority of the Act of June 28, 1938, costs allocated to flood control will not be returned to the United States; and considering present cost estimates, contributions by the Work Projects Administration or Civilian Conservation Corps, or both, to the extent of \$1,390,000 will not be required to be reimbursed, since reimbursement is not required under the acts by which these funds are made available; and since a finding that the costs of a project will probably be returned to the United States is necessary only as to expenditures from the reclamation fund (opinion of the Attorney General of September 7, 1937, unpublished).

The Interior Department Appropriation Act of 1940 contains an appropriation of \$500,000 for the project and the Corps of Engineers of the War Department has made available \$500,000 as a contribution toward the construction of the Lugert dam and reservoir. I recommend that the Altus project be approved and that construction be started as soon as pending applications for projects to be undertaken by the Work Projects Administration in connection with the Altus project have been approved by you.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE.

Approved February 13, 1941.

(Signed) FRANKLIN D. ROOSEVELT,
President.

NAME OF W. C. AUSTIN PROJECT

An act to change the name of the Lugert-Altus irrigation project in the State of Oklahoma to the W. C. Austin project. (Act of May 16, 1947, 61 Stat. 99, Public Law 69, 80th Cong., 1st sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, in honor and recognition of the outstanding service of the late W. C. Austin in securing irrigation for the benefit of southwestern Oklahoma, the project in the State of Oklahoma known as the Lugert-Altus irrigation project shall hereafter be known and designated as the W. C. Austin project. Any law, regulation, document, or record of the United States in which such project is designated or referred to under the name of the Lugert-Altus irrigation project shall be held to refer to such project under and by the name of the W. C. Austin project.

AVONDALE PROJECT

IDAHO

Funds were provided for the emergency rehabilitation of Avondale Project by the Interior Department Appropriation Act, 1954 (Act of July 31, 1953, 67 Stat. 261, Public Law 172, 83d Cong. 1st sess.). Funds were provided without a finding of feasibility. Additional funds were provided by the Interior Department Appropriation Act, 1955 (Act of July 1, 1954, 68 Stat. 365, Public Law 465, 83d Cong. 2d sess.)

PROVISIONS OF INTERIOR DEPARTMENT APPROPRIATION ACTS

[Extract from] An act making appropriation for the Department of the Interior for the fiscal year ending June 30, 1954, and for other purposes. (Act of July 31, 1953, 67 Stat. 261, 262, Public Law 172, 83d Cong., 1st sess.)

* * * * *

Construction and Rehabilitation: For construction and rehabilitation of authorized reclamation projects or parts thereof (including power transmission facilities) and for other related activities, as authorized by law, to remain available until expended, * * * * *
Provided further, That not to exceed \$222,000 shall be available toward the emergency rehabilitation of the Avondale Irrigation Project, Idaho, to be repaid in full under conditions satisfactory to the Secretary of the Interior: * * *

[Extract from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1955, and for other purposes. (Act of July 1, 1954, 68 Stat. 361, 365, Public Law 465, 83d Cong., 2d sess.)

* * * * *

Construction and Rehabilitation: * * * *Provided further,* That not to exceed \$53,000 shall be available toward the emergency rehabilitation of the Avondale Irrigation Project, Idaho, to be repaid in full under conditions satisfactory to the Secretary of the Interior * * *

BAKER PROJECT

OREGON

The Baker project was found feasible by the Secretary on March 17, 1931, under the provisions of section 4 of the act of June 25, 1910 (36 Stat. 836), and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702) and approved by the President on March 18, 1931.

THE SECRETARY OF THE INTERIOR,
Washington, March 17, 1931.

THE PRESIDENT,
The White House.

MY DEAR PRESIDENT: Section 4 of the act of June 25, 1910, (36 Stat. 835) provides in effect that after the date of that act no irrigation project to be constructed under the act of June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, section 4, act of December 5, 1924 (43 Stat. 701), provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary, until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

The various features requiring investigation and report in connection with the Baker Reclamation Project, Oregon, under subsection B, section 4, act of December 5, 1924, *supra*, will be discussed in the order in which presented in that subsection, as follows:

IRRIGATION PLAN AND WATER SUPPLY

The Lower Powder River Valley, with a length of 12 miles and

an average width of one mile, containing a gross area of 7,400 acres, lies from 15 to 20 miles northeasterly of Baker City, Oregon. The irrigable lands of the valley, comprising about 6,000 acres, are served by canals diverting from Powder River, which traverses the entire valley, and a large part of the lands have been under irrigation for many years. Stream flow has never been adequate after mid-summer to meet the valley requirements and has been further reduced in recent years by upstream irrigation development. It is proposed to construct the Thief Valley reservoir on Powder River immediately above the valley to be irrigated, with a capacity of 15,000 acre feet, which will be adequate to provide a full water supply. Unused winter and spring flood waters exceed the proposed reservoir capacity in every year. No other works are contemplated.

ENGINEERING FEATURES

The proposed impounding dam will be triple arch concrete structure with a maximum height for the central arch of 52 feet from rock foundation to top of dam, and a total length, across the stream, of 380 feet, requiring in its construction 5,500 cubic yards of concrete. This dam will raise the stream level 40 feet. Testing of the foundations by pits and diamond drill indicates good rock at shallow depths. The dam is to be of ample section to withstand overflow to an estimated maximum depth of 10 feet over the central arch, the other arches to be built above flood levels. Release of storage will be controlled by two simple slide gates.

CONSTRUCTION COST (ESTIMATED)

Dam	\$135,000
Right of way for reservoir flowage and dam.....	42,000
Previous investigations and reports.....	12,000
Foundation testing	5,000
Contingencies	6,000
Total	200,000

LAND AND ITS DEVELOPMENT

All of the lands to be benefited are settled and at present generally farmed to the limit of the available water supply. They have been classified by a representative of the Bureau of Reclamation, who reported a tillable area of 3,200 acres and a pasture area of 2,800 acres, with the balance of 1,400 acres either waste land or lands not served by existing canals from Powder River. A part of the latter may later be added to the indicated tillable area. Tillable lands are now principally devoted to the production of alfalfa and grain which is largely converted locally into dairy products, beef, and mutton. With the augmented water supply, crop production will be materially increased, which will permit a corresponding increase in the number of stock on the farms, now comprising 13,000 sheep; 1,700 cattle, and a few hogs. The pasture lands are

unfitted by high water table and periodic inundation for the production of tilled crops, but constitute a valuable adjunct in the established farming operations. Their usefulness will be increased through the augmented water supply by increase in grazing capacity and the lengthening of the grazing season. The entire area is settled by experienced stockmen in holdings of less than 160 acres of tillable land, and most farms have fair to good improvements. No settlement problem is involved. The increased crop production to result from the supplemental water supply is expected to be reflected in an increase in crop values much larger than the increase in costs of production and in enhanced profit.

FINDING REGARDING FEASIBILITY OF PROJECT

The foregoing data justify the conclusion that the project is feasible from an engineering and economic standpoint, and I accordingly so find and declare.

PROBABLE RETURN TO RECLAMATION FUND OF COST OF CONSTRUCTION

The construction cost is estimated at \$60.00 per acre for the tillable land, if no part of the cost is collected from the pasture lands which will be benefited to a lesser extent than the tillable lands. A proposed contract with the Lower Powder Irrigation District, comprising all of the valley lands, provides for repayment of costs in 40 years, requiring an annual payment of approximately \$1.60 per acre for construction if the entire cost is borne by the tillable lands alone. Operation and maintenance will be conducted by the District and such costs for the reservoir should be small. Increased annual crop yields to result on the tillable lands are estimated at not less than \$8.00 per acre. These conditions fully justify the belief that construction costs will be repaid as intended. I therefore recommend approval of this project and issuance of authority to this department to proceed with construction. By the act of January 12, 1927 (44 Stat. 959), \$450,000 was appropriated for commencement of construction; and subsequent appropriations have kept this amount available to the present time.

Very truly yours,

(Signed) RAY LYMAN WILBUR,
Secretary.

Approved March 18, 1931.

(Signed) HERBERT HOOVER,
President.

BALMORHEA PROJECT

TEXAS

The Balmorhea project was found feasible by the Secretary on March 16, 1944, under the provisions of the Water Conservation and Utilization Act of August 11, 1939, as amended, and approved by the President on April 15, 1944.

THE SECRETARY OF THE INTERIOR,
Washington, March 16, 1944.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: An investigation has been made of the Balmorhea project involving the irrigation of approximately 7,520 acres of land in Reeves County, Texas, and pursuant to the authority of the Act of August 11, 1939 (53 Stat. 1418), as amended (herein called the Act), I submit this report on the proposed project and request your approval of the findings, recommendations, and certifications contained herein.

PROJECT PURPOSE

The primary purpose of the project proposed is to provide a supplemental water supply for approximately 7,520 acres of land in the Madera Valley near the town of Balmorhea in west central Texas. This would be done through the purchase of additional water rights, the repair and modernization of existing facilities, and the construction of a new canal. The additional water thus made available would materially increase crop production on the project lands and also provide off-season water to irrigate winter pasturage for livestock.

The immediate construction of the project would make possible an increased production of food crops for people and livestock now urgently needed. The project if completed now would also aid in solving many local postwar problems. By providing an assured water supply it would help to stabilize the economy of the area and so prevent the migration elsewhere of the farmers who,

without additional irrigation water, are unable to support their families. It would offer opportunities after the war for a small number of new settlers to establish farm homes.

THE PLAN

The supplemental water supply would be provided by purchasing water rights in Phantom Lake Spring. A main canal, concrete lined to prevent excessive loss of water through seepage, would be constructed. The existing Madera Diversion Dam, main canals, and laterals would be rehabilitated. Structures contemplated for the project, in addition to the concrete canal lining, would consist of a concrete canal heading, a metal flume, closed conduits, and the usual turnouts, wasteways, small bridges, and similar features. An adequate water supply is believed to be available for the lands to be benefited by the proposed project works.

Changes in these general plans may be found necessary, but any changes would be of a minor nature and would neither alter the general objectives of the project nor result in material departure from the findings which are predicated on the plans for the project.

PARTICIPATION OF FEDERAL AGENCIES

The Bureau of Reclamation would secure the necessary water rights to Phantom Lake Spring, reconstruct the diversion dam and canal system, and would construct a new canal and other necessary and appurtenant structures. Subject to change, the Bureau also would operate the system after it is built. The Bureau would negotiate contracts with the water users for the repayment of the reimbursable construction charges.

The War Food Administrator, acting in the stead of the Secretary of Agriculture, has transmitted a letter, which is attached, indicating his approval of the project and the extent of the proposed participation by the Department of Agriculture. From the attached letter it will be noted that the War Food Administrator concurs in my belief that the construction is justifiable as an aid in the production of needed agricultural products.

Services, labor, materials, supplies, equipment, and similar items which may become available through the Selective Service System, Prisoner of War camps, or other Federal agencies may be utilized under the terms and conditions fixed by such agencies, if, in my opinion, such use would effectively expedite construction of the project.

PARTICIPATION OF NON-FEDERAL AGENCIES

All of the lands to be benefited by the project lie within the boundaries of the Reeves County Water Improvement District No. 1, of Balmorhea, Texas. It is expected that a contract with the Government would be made by this, or a similar organization em-

bracing the project lands, for the repayment of that part of the construction costs which are determined to be reimbursable. The water users benefited by the work of the Department of Agriculture would be required to repay the reimbursable monies expended in that work in accordance with the Act. Aid which may be offered by the local interests would be accepted.

ESTIMATED COSTS AND FINANCING PROCEDURE

The cost of the project works which would be undertaken by the Bureau of Reclamation is estimated to be about \$347,000. The Department of Agriculture would undertake activities in connection with the project, and pursuant to section 5 of the Act, which are estimated to cost \$569,000. The activities of both agencies would be financed with monies appropriated for Water Conservation and Utilization projects pursuant to section 12 of the Act. The total expenditures are estimated to be \$916,000.

The water users could repay approximately \$255,600 of the investment in the works proposed to be built by the Bureau of Reclamation. The remainder as authorized by the Act would be non-reimbursable.

The water users could repay approximately \$307,000 of the cost of the works proposed by the Department of Agriculture. The remainder of these costs, as authorized by the Act, would be non-reimbursable.

Sufficient funds for the initiation of construction of the project in carrying out the function of the Department of the Interior under the Act have been appropriated and are now available.

SIZE OF FARM UNITS

As the exact size of the farm units in the project area may vary in accordance with the varying conditions of the project lands, limitations on the various holdings would be established after more complete and final surveys had been made. It now appears that ultimately the maximum sized holdings should not exceed 160 acres of irrigable land. In this connection, considering the problems attendant on farm operation during the war and the need for the greatest possible production of agricultural products with the available farm labor supply, it may be desirable to determine, within the limits of the Act, that for the duration of the war only, now existing land holdings in single ownership will be regarded as farm units with respect to the limitations on delivery of water even though they exceed in area the normal maximum to be established for farm units on the project.

FINDINGS, CERTIFICATIONS, AND RECOMMENDATIONS

Based upon the report covering the engineering and economic aspects of the work proposed to be accomplished by the Bureau of Reclamation, I find and certify that:

1. The proposed project has engineering feasibility.
2. The total estimated cost would be \$347,000.
3. The estimated cost which properly could be allocated to irrigation is \$347,000.
4. The water users could probably repay, in accordance with the requirements of Section 4 of the Act, approximately \$255,600 of the cost of construction.
5. No part of the estimated costs properly could be allocated to municipal or miscellaneous water supply or power.
6. No part of the estimated costs properly could be allocated to the irrigation of Indian trust or tribal lands.
7. No part of the estimated costs properly could be allocated to flood control.
8. The proposed construction is justifiable as an aid in the production of needed agricultural products.

If you approve the project, it is planned to proceed immediately with matters relating to land acquisition, water rights, and repayment contracts so that the requirements of the statutes as to those matters can be met as promptly as possible. The project has been cleared by the War Production Board for construction and procurement of materials.

On the basis of the foregoing report and findings, I recommend that you approve this project for construction.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE.

Approved April 15, 1944.

(Signed) FRANKLIN D. ROOSEVELT,
President.

BELLE FOURCHE PROJECT

SOUTH DAKOTA

The Belle Fourche project was authorized by the Secretary under the Reclamation Act of 1902 (32 Stat. 388) on May 10, 1904; examined and reported upon by a Board of Army Engineers pursuant to section 1 of the act of June 25, 1910 (36 Stat. 835), and approved by the President on January 5, 1911. Supplemental storage for this project was authorized as a unit of the Missouri River Basin project under terms of the Flood Control Acts of 1944 and 1946.

UNITED STATES GEOLOGICAL SURVEY,
RECLAMATION SERVICE,
Denver, Colo., April 29, 1904.

Mr. F. H. NEWELL,
Chief Engineer, U. S. R. S., Washington, D. C.

SIR: The undersigned have examined the locality, plans and estimates of the Belle Fourche project, as surveyed and designed by Mr. R. F. Walter, and have to submit the following report:

The project contemplates the diversion of Belle Fourche River into a large conduit, to carry it to a reservoir to be constructed on Dry Creek, from which it is to be conducted in canals to irrigate large tracts of land in the valleys on both sides of Belle Fourche River as far east as Willow Creek.

The lands to be irrigated are very productive, but a considerable portion are rolling, making distribution of irrigation waters rather expensive. No very difficult engineering problems are presented, the most serious being the floating ice that occurs, and must be safely handled every spring.

The limit of the project is the available water supply, upon which the data is very meagre, consisting only of measurements since last June, during which time the rainfall in the basin as indicated by the records was far above normal. For these reasons we have directed a survey of a diversion of the Little Missouri into the Belle Fourche, and have so modified the designs of the system, as to provide for the use of the waters of Crow, Owl, Indian, and Horse Creeks. We have also directed a reconnaissance of the Belle Fourche and Little Missouri basins to discover possi-

ble storage facilities, to regulate the freshets that would otherwise exceed the capacity of the inlet canal. With the waters of the Little Missouri, and the creeks mentioned, we are of the opinion that the available water supply is ample for the irrigation of not less than 60,000 acres of land, and on this basis the cost, as at present estimated, would be about \$34 per acre, which may be diminished by increasing the acreage, if cheap storage can be found above.

We consider the project feasible, and recommend that Mr. Walter be instructed to continue the investigations, and to prepare plans and specifications preparatory to early construction.

We also recommend that the Honorable The Secretary of the Interior be requested to give his preliminary approval to the Belle Fourche Project, and that the sum of \$2,100,000 be set aside in the reclamation fund for its construction.

When departmental approval is obtained, we recommend that the land owners under the proposed system be informed, and advised to form an organization, which can deal with the department in arranging details to conform with the law. About one-half the land to be irrigated is in private ownership, and the balance public land.

(Signed) A. P. DAVIS,
Asst. Chief Engr.
J. H. QUINTON,
Consulting Engr.

UNITED STATES GEOLOGICAL SURVEY,
RECLAMATION SERVICE,
May 7, 1904.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: In accordance with the act of June 17, 1902, and instructions from you, surveys have been conducted in South Dakota, particularly on what is known as the Belle Fourche project. There is ample irrigable land here, but the water supply is limited. It is believed, however, that there is sufficient for the reclamation of 60,000 acres of land, about half of which is in private ownership.

The plans and estimates for this project have been passed upon by Messrs. A. P. Davis and J. H. Quinton, and a report made to the Chief Engineer recommending further detailed work leading to ultimate construction. The estimates show that the cost of reclamation will be less than \$35 per acre.

On the basis of the information now at hand, I respectfully recommend that the sum of \$2,100,000 be set aside from the reclamation fund for the construction of this project, contingent upon securing suitable land and water rights, organization of present

land owners, and satisfactory completion of various engineering details.

Very respectfully,

(Signed) CHAS. D. WALCOTT,
Director.

OFFICE OF THE SECRETARY,
Washington, May 10, 1904.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: In a letter to the Department under date of the 7th instant you presented for my consideration the matter of the Belle Fourche Project, South Dakota, under act of June 17, 1902, —32 Stat., 388—.

It appears as the result of surveys and investigation that the water supply of the region is limited; that there is a large quantity of irrigable land; that there is enough water to reclaim about 60,000 acres of land, about half of which is in private ownership, and that the estimates show that the cost of reclamation will be less than \$35.00 per acre.

Your recommendation is that the sum of \$2,100,000 be set aside from the reclamation fund for construction of this project, contingent on securing suitable land and water rights, organization of present land owners and satisfactory completion of various engineering details.

In view of your recommendation I hereby set aside the sum of \$2,100,000, or so much thereof as may be necessary, from the sum provided by the Act mentioned, for use in the construction of this project, subject to the contingencies above set forth.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

PROVISIONS OF ACT AUTHORIZING THE SALE OF UNSOLD AND UNAPPROPRIATED PORTIONS OF LANDS, NEWELL, S. DAK.

An act authorizing the Secretary of the Interior to sell the unsold and unappropriated portions of lands within the town site of Newell, S. Dak., and for other purposes. (Act of September 8, 1916, 39 Stat. 852, Public Law 285, 64th Cong., 1st sess.)

* * * That the Secretary of the Interior be, and he is hereby, authorized and directed to reserve and set apart such portions of the unsold and unappropriated lands within the town site of

Newell, Butte County, South Dakota, as he deems necessary for administrative purposes in connection with the Belle Fourche irrigation project, and after subdividing the remaining portions of such lands into tracts that in his judgment would render the same most salable, and appraising the reasonable value of each such tract, sell the same, for not less than the appraised value, at public auction to the highest bidder, on such terms and under such rules and regulations as he may establish.

SEC. 2. That of the proceeds of such sales, after deducting all expenses incurred in the subdivision, appraisal, and sale of said land, an amount not exceeding \$15,000 shall be covered into the Treasury of the United States in a special fund available only for expenditure by the Secretary of the Interior to provide or assist in providing the said town of Newell, Butte County, South Dakota, an adequate system of water supply for domestic purposes; under such terms and conditions as may be provided by the Secretary of the Interior, or for such other and further public improvements as the Secretary of the Interior and the municipal authorities of said town may agree upon. The net proceeds of such sale in excess of \$15,000, if any there be, shall be covered into the Treasury of the United States and credited to the Reclamation Fund in accordance with existing law for the sale of town sites on Reclamation projects.

SEC. 3. That the Secretary of the Interior is hereby authorized to make such rules and regulations as may be necessary for carrying into effect the provisions of this act.

BITTER ROOT PROJECT

MONTANA

The rehabilitation of the Bitter Root project was authorized by the Act of July 3, 1930 (46 Stat. 852). The report of the Secretary of the Interior required by section 5 of the Act was submitted to the Congress on November 25, 1930.

The Woodside unit of the Bitterroot Valley project was found feasible by the Secretary on February 23, 1944, under the provisions of the Water Conservation and Utilization Act of August 11, 1939, as amended, and approved by the President on March 22, 1944, but no construction has been undertaken.

BITTER ROOT IRRIGATION PROJECT AUTHORIZED FOR REHABILITATION

An act for the rehabilitation of the Bitter Root irrigation project, Montana. (Act of July 3, 1930, 46 Stat. 852, Public Law 506, 71st Cong., 2d sess.)

SEC. 1. That there is hereby authorized to be appropriated from the reclamation fund established by the Act of June 17, 1902 (Thirty-second Statutes, page 388), the sum of \$750,000, or as much thereof as may be necessary to be used for the rehabilitation of the Bitter Root irrigation project in Montana.

SEC. 2. The Secretary of the Interior, hereinafter styled the Secretary, is authorized to use money thus appropriated for the following purposes:

(1) For liquidating bonded and other outstanding indebtedness of such irrigation project on such basis of valuation as the Secretary may regard as equitable, not exceeding 75 per centum of the principal and accrued interest, no portion of such outstanding indebtedness to be liquidated except a total outstanding indebtedness of such project is so liquidated;

(2) For doing or causing to be done under his supervision any construction, betterment, or repair work necessary to place the irrigation system of such project in good operating condition, and as provided for in the contract hereinafter required;

(3) For loaning to such irrigation district, hereinafter provided for, such funds as in the opinion of the Secretary are necessary for any construction, betterment, or repair work to place the irrigation system of such project in good operating condition.

SEC. 3. All funds so used or advanced shall be repaid to the United States within a period, to be fixed by the Secretary, of not more than forty years, with interest at the rate of 4 per centum per annum on the funds so used or advanced from the date of such use or advancement until repaid. Before any funds are so used or advanced a contract or contracts satisfactory to the Secretary shall be executed by an irrigation district, formed under State law, obligating such district to repay the funds so used or advanced as required by this act. Any contract so executed with such district shall require a lien on the land and on the irrigation systems of such project. The operation and maintenance of such project shall be continued by the authorities in charge under the supervision of the Secretary, so far as necessary to effectuate the purposes of this act.

SEC. 4. In case of default in the payment when due of any interest or other charges under any contract executed as herein provided there shall be added to the amount unpaid a penalty of one-half of 1 per centum of the amount unpaid on the 1st day of each month thereafter so long as such default shall continue, such penalties being in addition to the interest provided in section 3. The provisions of any contract executed hereunder may be enforced by suit or by the foreclosure of any lien in the manner authorized by the State laws applicable in similar cases. In addition to other remedies the Secretary, in any contract executed hereunder, may provide that in case of default for more than twelve months in the payment of any installment, the control, operation, and maintenance of the project may, in the discretion of the Secretary, be assumed by the United States and the delivery of water withheld until payments are duly made in accordance with the contract requirements.

SEC. 5. No funds shall be appropriated for the purposes herein authorized until investigation and examination shall have been made of all pertinent conditions surrounding such project and until the Secretary has made a report of his finding in writing to Congress that in his opinion by the action proposed the project can and will be placed upon a sound basis from a financial and economic standpoint so that the funds so used and advanced will be returned to the United States.

SEC. 6. The Secretary is authorized to perform any and all acts and to make and enforce all needful rules and regulations for effectuating the purposes of this Act.

OFFICE OF THE SECRETARY,
Washington, November 25, 1930.

THE SPEAKER OF THE HOUSE OF REPRESENTATIVES.

MY DEAR MR. SPEAKER: Pursuant to section 5 of the Act of July 3, 1930 (Public No. 506, 71st Cong.), the following report is submitted concerning the Bitter Root project in Montana:

The appropriation of \$550,000 is requested for the fiscal year 1932. This sum, if appropriated, will be utilized as follows:

(a) Five hundred thousand dollars, or so much thereof as may be necessary, for liquidating bonded and other outstanding indebtedness, on the basis of not exceeding 75 per cent of the principal and 75 per cent of accrued interest found by field investigation to be approximately as follows:

District bonds, par value.....	\$552,000
Principal on bonds	13,000
Refunding bonds, series No. 1.....	12,000
Refunding bonds, series No. 2.....	59,500
Interest on bonds to March 4, 1931.....	18,869
Operation and maintenance warrants	3,530
Interest on operation and maintenance warrants.....	421
Construction fund warrants	6,961
Interest on construction warrants.....	386

Total	666,667
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75 per cent of \$666,667.....	500,000
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(b) Fifty thousand dollars or so much thereof as may be necessary, for replacing wooden turnouts and flumes estimated to cost:

Replacement 11 turnouts	\$2,500
Replacement 5,420 linear feet, wooden flume.....	47,500
	<u>\$50,000</u>
Total	550,000

Subsequent appropriations will be requested as need may arise, the total of such appropriations not to exceed the sum of \$750,000 heretofore authorized.

Before any funds are used or advanced a contract satisfactory to the Secretary of the Interior will be executed by the Bitter Root irrigation district obligating that district to repay the funds so used or advanced within not to exceed 40 years, with interest at the rate of 4 per cent per annum from the date of use or advancement until repaid. The contract will provide for a lien on the land within the boundaries of the district and on the irrigation system of the project. Such additional contracts will be executed as may be found necessary as an incident to the liquidation of outstanding bonded and other indebtedness on the basis of not to exceed 75 per cent of the principal and accrued interest.

The Bitter Root project comprises an area of nearly 20,000 acres located in the southwestern portion of Montana. It has a fertile soil, an adequate water supply, and a favorable climate. The principal cash crops are apples, sugar beets, peas, cabbage, and head lettuce, while sour cherries are growing in importance. The major portion of the irrigable area is used for the production of forage and grain crops to be fed to livestock. A record has been kept during recent years of the cropped area but not of the

yields. Based upon a conservative estimate of yields and prices the average value per acre of crops produced in 1929 was approximately \$45. Further detailed information relative to the project will be found on pages 227 to 234 of the hearings before the Committee on Irrigation and Reclamation, House of Representatives, Seventy-first Congress, second session, dated March 6, 1930.

Year	Loan	Interest	Amor- tized re- payment	Opera- tion and main- tenance costs	Total expendi- tures	Total receipts	Surplus	Total surplus
1931-----	\$550,000	\$11,000	-----	\$38,000	\$49,000	\$64,250	\$15,250	\$15,250
1932-----	75,000	23,500	-----	26,000	49,500	66,000	16,500	31,750
1933-----	75,000	26,500	-----	24,000	50,500	67,750	17,250	49,000
1934-----	50,000	29,000	-----	22,000	51,000	69,500	18,500	67,500
1935-----	(¹)	30,000	-----	22,000	52,000	69,500	17,500	135,000
1936}	-----	-----	\$40,183	20,000	60,183	65,000	4,817	131,340
1955}	-----	-----	-----	-----	-----	-----	-----	-----
1956}	-----	-----	40,183	20,000	60,183	65,000	4,817	68,595
1970}	-----	-----	-----	-----	-----	-----	-----	-----

¹ Surplus reduced \$50,000 in 1935 to complete flume replacements.

² Surplus available for replacement of 9,000 linear feet of wooden flume estimated to cost \$135,000, which work will extend over a period of about 5 years.

Total receipts are based on an assessment of \$3.50 per acre, which can be increased to \$4 per acre to cover any deficits.

This financial set-up is based upon the assumption that during the first five years, when flume replacements are being made, interest only will be paid on funds advanced by the United States, and the district will levy assessments such that the total receipts, including money received from the sale of land, water, and miscellaneous revenues, shall be not less than the amounts above shown. The amount of the loan, \$750,000, is to be amortized and payments extended over a period of 35 years requiring an annual installment of approximately \$40,183. The major portion of the 5 miles of the existing flumes are to be replaced with permanent earthen canals, leaving about 9,000 feet of wooden flumes that will have to be replaced a second time, beginning about 1955, at an estimated cost of \$135,000. The financial set-up shows that the necessary surplus can be provided without increasing the annual assessments and collections.

Premises considered, it is my opinion that by the action proposed the Bitter Root project can and will be placed upon a sound basis from a financial and economic standpoint and that the funds used or advanced will be returned to the United States as required by law.

Very truly yours,

(Signed) RAY LYMAN WILBUR,
Secretary.

BITTERROOT VALLEY PROJECT—WOODSIDE UNIT

THE OFFICE OF THE SECRETARY,
Washington, February 23, 1944.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: An investigation has been made of the Woodside Unit of the Bitterroot project involving the irrigation of approximately 18,630 acres of land in Missoula and Ravalli Counties, Montana, and pursuant to the authority of the act of August 11, 1939 (53 Stat. 1418), as amended, (herein called the Act) I submit this report on the proposed project and request your approval of the findings, recommendations, and certifications contained herein.

PROJECT PURPOSE

The primary purpose of the proposed project would be to furnish a supplemental water supply to approximately 18,630 acres of land, located on the west side of the Bitterroot River between the towns of Lolo and Hamilton, Montana. The immediate development of this area would provide a means of increasing the production of agricultural products now vitally needed. After the war it is believed that the project would contribute toward the solution of problems arising out of interstate movements of agricultural populations by providing new homes and opportunities for additional farm families.

THE PLAN

The larger and most westerly of two canals proposed for construction would replace an old abandoned canal for a short distance and would be extended to have a total length of about 35 miles. This canal, which would be known as the Woodside Canal, would have an initial capacity of 300 second feet. A second canal, which would be known as the Florence Canal, would carry an estimated 90 second feet of water for a total distance of about sixteen miles. Woodside Canal would receive water from the Bitterroot River at a point about two miles north of Hamilton

and the Florence Canal would receive its water from the Bitter-root River at a point about four miles north of Stevensville. Adequate storage capacity in an existing reservoir constructed by the Montana Water Conservation Board would be acquired by purchase.

Structures contemplated for the development would consist of siphons, culverts, and the usual turnouts, wasteways, small bridges, and similar features.

Changes in these general plans may be found necessary, but it is expected that any changes will be of a minor nature and will neither alter the general objectives of the project, nor result in material departures from the present findings, predicated on the present plans for the project.

PARTICIPATION OF FEDERAL AGENCIES

The Bureau of Reclamation would construct the canal system, and other necessary and appurtenant structures, and subject to change, also would operate the system after it is built. The Bureau would negotiate contracts with the water users for the repayment of the reimbursable construction charges.

The War Food Administrator, acting in the stead of the Secretary of Agriculture, has transmitted a letter which is enclosed, indicating his approval of the project and the extent of the proposed participation by the Department of Agriculture. From this letter it will be noted that the War Food Administrator concurs in my belief that the construction would be justifiable as an aid in the production of needed agricultural products.

Services, labor, materials, supplies, equipment, and similar items which may become available through the Selective Service System, Prisoner of War Camps, or other Federal agencies may be utilized under the terms and conditions fixed by such agencies, if, in my opinion, such use would effectively expedite construction of the project.

PARTICIPATION OF NON-FEDERAL AGENCIES

Local interests requesting the development of the project indicate that they would form a suitable organization with which to contract with the Government for the repayment of that part of the construction cost which is determined to be reimbursable. The water users benefited by the work of the Department of Agriculture would be required to repay the reimbursable money expended in that work in accordance with the Act. Aid which may be offered by the local interests would accepted.

ESTIMATED COST AND FINANCING PROCEDURE

The cost of the project works which would be undertaken by this Department would be about \$850,000. The project lands also would assume an obligation of about \$220,000, estimated to be

the cost of purchasing the required storage capacity in an existing reservoir constructed by the Montana State Water Conservation Board, making a total cost of \$1,070,000 for irrigation facilities. In connection with the development, the Department of Agriculture would undertake activities pursuant to Section 5 of the Act which are estimated to cost \$752,000. The activities of both Departments would be financed with monies appropriated for Water Conservation and Utilization projects. The total project cost is estimated to be \$1,822,000.

It is estimated that the water users could repay \$473,200, of the investment in the works to be built by the Bureau of Reclamation, of which \$220,000 would represent the investment in a storage reservoir heretofore built by the Montana Water Conservation Board, and \$253,200 the investment in additional works to be built. All net costs of the additional works in excess of \$253,200 would, as authorized by the Act, be excluded from the project construction cost and be treated as nonreimbursable.

It is estimated that the water users could repay \$562,600 of the costs of the work proposed by the Department of Agriculture. All costs in excess of this amount would, as authorized by the Act, be treated as nonreimbursable.

Sufficient funds for the initiation of the project have been appropriated and are now available for allotment.

SIZE OF FARM UNITS

Since the exact size may vary over the project area in accordance with the varying conditions of the project lands, limitations on the various holdings will be established after more complete and final surveys have been made. It now appears that ultimately the proper size holding would be about 160 acres of irrigable land. In this connection, considering the problems attendant on farm operation during the war and the need for the greatest possible production of agricultural products with the available farm labor supply, it may be desirable to determine, within the limits of the Act, that for the duration of the war only, now existing land holdings in single ownership will be regarded as farm units with respect to the limitations on delivery of water even though they exceed in area the normal maximum to be established for farm units on the project.

FINDINGS, CERTIFICATIONS, RECOMMENDATIONS

Based upon the report covering the engineering and economic aspects of the work proposed to be accomplished by the Bureau of Reclamation, I find and certify that:

1. The proposed project has engineering feasibility.
2. The total estimated cost would be \$1,070,000.
3. The estimated cost which properly could be allocated to irrigation is \$1,070,000.
4. The water users probably could repay \$473,200 in accordance with the

requirements of Section 4 of the Act, including a share of the cost of existing works which are to be assumed by them.

5. No part of the estimated costs properly could be allocated to municipal or miscellaneous water supply or power.

6. No part of the estimated costs properly could be allocated to the irrigation of Indian trust and tribal lands.

7. No part of the estimated costs properly could be allocated to flood control.

8. The proposed construction is justifiable as an aid in the production of needed agricultural products.

If you approve the project, it is planned to proceed immediately with matters relating to land acquisition, water rights, and repayment contracts so that the requirements of the statutes may be met as promptly as possible. The project has heretofore been submitted to the War Production Board for clearance for commencement of construction and procurement of materials needed for construction.

On the basis of the foregoing report and findings, I recommend that you approve this project for construction.

Sincerely yours,

(Signed) ABE FORTAS,
Acting Secretary of the Interior.

THE WHITE HOUSE.

Approved March 22, 1944.

(Signed) FRANKLIN D. ROOSEVELT,
President.

BLACKFEET (INDIAN) PROJECT

MONTANA

The Blackfeet (Indian) project was authorized by the Indian Appropriation Act of March 1, 1907 (34 Stat. 1015), and the Secretary on June 28, 1907, instructed the Bureau of Reclamation to undertake the surveys and proceed with the construction work. The project is now in operation by the Bureau of Indian Affairs.

PROVISION OF INTERIOR DEPARTMENT APPROPRIATION ACT, 1908

[Extract from] An act making appropriations for the current and contingent expenses of the Indian Department, for fulfilling treaty stipulations with various Indian tribes, and for other purposes, for the fiscal year ending June thirtieth, nineteen hundred and eight. (Act of March 1, 1907, 34 Stat. 1015, 1035, Public Law 154, 59th Cong. 2d sess.)

* * * That the following sums be, and they are hereby, appropriated, out of any money in the Treasury not otherwise appropriated, for the purpose of paying the current and contingent expenses of the Indian Department, for fulfilling treaty stipulations with various Indian tribes, and in full compensation for all offices the salaries for which are specially provided for herein for the service of the fiscal year ending June thirtieth, nineteen hundred and eight, namely:

* * * * *

That so soon as all the lands embraced within the said Blackfeet Indian Reservation shall have been surveyed the Commissioner of Indian Affairs shall cause allotments of the same to be made under the provisions of the allotment laws of the United States to all persons having tribal rights or holding tribal relations and who may rightfully belong on said reservation. That there shall be allotted to each member forty acres of irrigable land and two hundred and eighty acres of additional land valuable only for grazing purposes; or, at the option of the allottee, the entire three hundred and twenty acres may be taken in land valuable only for grazing purposes, respectively, and for constructing irrigating systems to irrigate the aforesaid

allotted lands, three hundred thousand dollars, one hundred thousand dollars of which shall be immediately available, the cost of said entire work to be reimbursed from the proceeds of the sale of the lands within said reservations: *Provided*, That the Indians, and the settlers on the surplus land, in the order named, shall have a preference right for one year from the date of the President's proclamation opening the reservation to settlement, to appropriate the waters of the reservation which shall be filed on and appropriated under the laws of the State of Montana, by the Commissioner of Indian Affairs on behalf of the Indians taking irrigable allotments and by the settlers under the same law. At the expiration of the one year aforesaid the irrigation system constructed and to be constructed shall be operated under the laws of the State of Montana, and the title to such systems as may be constructed under this Act, until otherwise provided by law, shall be in the Secretary of the Interior in trust for the said Indians, and he may sue and be sued in matters relating thereto: *And provided further*, That the ditches and canals of such irrigation systems may be used, extended, or enlarged for the purpose of conveying water by any person, association, or corporation under and upon compliance with the provisions of the laws of the State of Montana: *And provided further*, That when said irrigation systems are in successful operation the cost of operating the same shall be equitably apportioned upon the lands irrigated, and, when the Indians have become self-supporting, to the annual charge shall be added an amount sufficient to pay back into the Treasury the cost of the work done in their behalf within thirty years, suitable deduction being made for the amounts received from the disposal of the lands within the reservation aforesaid: *Provided*, That the right to the use of water acquired under the provisions of this Act shall be appurtenant to the land irrigated, and beneficial use shall be the basis, the measure and the limit of the right: * * *

DEPARTMENT OF THE INTERIOR,
OFFICE OF INDIAN AFFAIRS,
Washington, May 11, 1907.

The DIRECTOR OF THE RECLAMATION SERVICE.

SIR: The Indian Appropriation Act of March 1, 1907 (34 Stat. L., 1015-1035), provides for allotments to the Indians of the Blackfeet Reservation in Montana, "And for constructing irrigation systems to irrigate the aforesaid allotted lands \$300,000, \$100,000 of which shall be immediately available, the cost of said entire work to be reimbursed from the proceeds on the sales of the lands within said reservations."

The \$100,000 made immediately available has been brought

upon the books of this Office and can be used for the purpose indicated.

In a letter dated May 1, 1907, Capt. J. Z. Dare, Acting Agent in Charge of the Blackfeet Agency, invites attention to this appropriation, and asks to be informed whether or not any portion of the work can be begun during the fiscal year. He requests this information in view of the necessity of finding employment for the Indians at the earliest date practicable.

It is hardly supposed that any work of construction can be begun during this fiscal year, but your attention is invited to the matter that the preliminary work may be undertaken at once and construction commenced as soon as possible. It is understood that the General Land Office has arranged for the survey on the reservation.

Very respectfully,

(Signed) C. H. FARRABEE,
Acting Commissioner.

DEPARTMENT OF THE INTERIOR,
CHIEF ENGINEER, INDIAN SERVICE, (IRRIGATION),
522 BUMILLER BLDG.,
Los Angeles, Calif., June 13, 1907.

The SECRETARY OF THE INTERIOR,
Washington, D. C.

SIR: I am in receipt of a copy of Indian Office letter of May 11, 1907 addressed to the Director of the Reclamation Service, with reference to irrigation matters on the Blackfeet Reservation, Montana. A similar copy was simultaneously forwarded Supervising Engineering Savage, of Montana, who in a letter which reached me recently states:

The limited allotment available for expenditure on St. Mary's Project work during the calendar year 1907 will make it possible for us to have the services of Mr. C. C. Babb to an extent in connection with the investigation of the proposed work on the Blackfeet Reservation.

In view of the fact that the Reclamation Service has a force of engineers already at work on the Blackfeet Reservation, with substantial office headquarters erected at the Agency, I recommend that it undertake the surveys and investigations, and subsequently superintend the construction of such canals as it is deemed advisable to build at that point for the irrigation of Indian allotments.

Capt. Dare, the Agent at Browning, acted as disbursing officer on the former irrigation work, performed under the supervision of Engineer Robinson of the Indian Service, and I assume that he could continue in such capacity should the work be prosecuted

under the supervision of the Reclamation Engineers on the ground.

Either Mr. Hill or I can act as consulting Engineers on the work from time to time, as occasion arises, and render the Reclamation Service such assistance as we can. In this connection Supervising Engineer H. N. Savage of Montana requests in his letter of the 17th. ultimo that I visit the Blackfeet Reservation with him, and aid in outlining the general plan of work to be performed. Since my assistant, Mr. Hill, is now in Montana, I have this day addressed him a letter, directing him to confer with Mr. Savage, and subsequently proceed to the Blackfeet Reservation if it is deemed advisable, it being necessary for me to visit Idaho, Wyoming and Utah points as soon as possible.

I would suggest that the Director of the Reclamation Service be furnished with a copy of my report dated Oct. 25, 1906, pertaining to irrigation matters on the Blackfeet Reservation. The report of Engineer H. F. Robinson, dated Oct. 26, 1905, will also furnish information relative to the Cut Bank Canal, which was extended under his supervision in the year named.

With the work on the Blackfeet Reservation thus arranged, all the large irrigation projects contemplated in the Indian Act for the fiscal year 1908 will be provided for.

Very respectfully,

(Signed) W. H. CODE,
Chief Engineer.

SECRETARY'S OFFICE,
DEPARTMENT OF THE INTERIOR,
Washington, D. C., June 28, 1907.

The DIRECTOR OF THE RECLAMATION SERVICE.

SIR: I enclose herewith a report by Chief Engineer W. H. Code, dated the 13th instant, in which, for reasons stated, he recommends that the Reclamation Service undertake surveys and investigations and subsequently superintend the construction of such canals as it is deemed advisable to build on the Blackfeet Reservation for the irrigation of Indian allotments.

The Acting Commissioner of Indian Affairs, in his communication of the 26th instant, herewith enclosed, concurs in this recommendation. Kindly advise me if there is any reason why the Reclamation Service may not undertake this work, and if there is none, consider this authority to proceed in accordance with the recommendations of Mr. Code and the Acting Commissioner.

Please return the enclosures with your reply.

Very respectfully,

(Signed) GEORGE W. WOODRUFF,
Acting Secretary.

TRANSFER ORDER

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington, January 9, 1924.

OFFICE OF THE COMMISSIONER

THE HONORABLE, THE SECRETARY OF THE INTERIOR.

(Through the Commissioner of Indian Affairs).

MY DEAR MR. SECRETARY: For a number of years in pursuance of instructions from the Department, the Bureau of Reclamation has been handling the construction and operation and maintenance work on the Blackfeet and Fort Peck Indian Reservations in Montana, expending the moneys appropriated by Congress for these projects. In recent years there have been little or no funds for construction, and the work has been confined substantially to operation and maintenance.

Work of this kind requires close contact with the Indians and a considerable knowledge of their general relations to the Government. For this reason it is believed that the management of this feature of reservation operations could be handled effectively by the forces of the Indian Office who are in general charge of the Reservations.

It is therefore recommended that beginning March 1, 1924, the operation and maintenance of the irrigation systems on the Blackfeet and Fort Peck Indian Reservations, Montana, be turned over to the care and management of the Indian Office, and that the accompanying order be signed.

Respectfully,

(Signed) OTTAMAR HAMELE,
Acting Commissioner.

I concur:

(Signed) CHAS. H. BURKE,
Commissioner of Indian Affairs.

Recommendation approved: January 12, 1924.

(Signed) HUBERT WORK,
Secretary.

THE SECRETARY OF THE INTERIOR.

Washington, January 12, 1924.

ORDER

On and after March 1, 1924, the operation and maintenance of the irrigation systems on the Blackfeet and Fort Peck Indian Reservations, Montana, now in charge of the Bureau of Reclamation, shall be turned over to the Bureau of Indian Affairs and be administered under its sole supervision. Appropriate arrangements regarding transfer of funds, property, records, etc., shall be made by the representatives of the two Bureaus duly authorized by the Commissioners thereof.

(Signed) HUBERT WORK,
Secretary.

BOISE PROJECT

IDAHO-OREGON

The Boise project, originally called Payette-Boise project, was authorized by the Secretary under the Reclamation Act of 1902 (32 Stat. 388) on March 27, 1905; examined and reported upon by a Board of Army Engineers pursuant to section 1 of the Act of June 25, 1910 (36 Stat. 835), and approved by the President on January 5, 1911.

The Arrowrock Dam was approved by the Secretary on January 6, 1911.

The Deadwood Dam and Reservoir of the Payette division was found feasible by the Secretary on October 18, 1928, and approved by the President on October 19, 1928, under provisions of section 4 of the Act of June 25, 1910 (36 Stat. 836) and subsection B of section 4 of the Act of December 5, 1924 (43 Stat. 702). The Payette division as a whole was found feasible by the Secretary November 20, 1935, under the provisions of the above acts and approved by the President on December 19, 1935.

The Anderson Ranch Dam and Reservoir was found feasible by the Secretary and his report sent to the President on June 25, 1940 under the provisions of section 9 of the Reclamation Project Act of 1939 (53 Stat. 1193). The report was sent to Congress on August 12, 1940.

PAYETTE—BOISE PROJECT

UNITED STATES GEOLOGICAL SURVEY,
RECLAMATION SERVICE,
Boise, Idaho, February 15, 1905.

Mr. F. H. NEWELL,
*Chief Engineer, Reclamation Service,
U.S.G.S., Washington, D. C.*

DEAR SIR: We, the undersigned, have inspected and considered the plans, estimates, conclusions, and recommendations of Mr. D. W. Ross, District Engineer, regarding the Payette-Boise irri-

gation project as set forth in report dated February 13, 1905, and submitted for our consideration, copy of which is enclosed herewith. We have discussed the project and considered it with the Directors of the Payette-Boise Water Users' Association and citizens, together with the representatives of the larger canals most concerned. It is our judgment that the initiation of any construction work connected with this project should take into consideration the ultimate reclamation of all the lands susceptible of irrigation from the Boise and Payette Rivers.

Realizing the impossibility of initiating immediate construction upon all the works required to irrigate this total area of 371,000 acres, we have selected for construction the smallest portion of the general project which, while forming a part of the whole, would be complete in itself.

Plans have been developed for taking a supply of water from the Boise River through either the New York canal or the Ridenbaugh canal, enlarged, and with a new location throughout part of their alignment to Indian Creek, down the natural channel of which the water will be permitted to flow for a distance of about 9 miles; thence in a canal along the south edge of Deer Flat to a point where water could be delivered into the proposed Deer Flat reservoir, which has a storage capacity of 127,000 acre-feet. This would bring under irrigation 147,000 acres. Of this area 50,000 acres will have a perfect water supply throughout the entire season from the natural flow of the river supplemented by stored water in Deer Flat reservoir. 40,000 acres would have delivered to it its present water supply which is one of the early priorities from the Boise River, and the balance—57,000 acres of new land above the Pioneer Irrigation District—will receive a flood water supply up to July, and 20,000 acres of this new land will have a late supply from a number of small storage reservoirs within their area. The cost of these works, including maintenance for ten years, is \$3,331,000, or \$22.66 per acre.

As recommended by the Water Users' Association, it is proposed to assess the cost of works to irrigate the entire 371,000 acres under the Payette-Boise project uniformly. The estimated cost of reclaiming this entire area, including maintenance for ten years and credits allowed for existing works, is \$26.90 per acre. Therefore, this 147,000 acres would return to the reclamation fund \$623,300 in excess of the cost of the works required for their irrigation.

In order that the fund available for the construction of this project may all be used for construction purposes, we recommend that:

1. The landowners under the Ridenbaugh and Settlers canals shall secure title to the same so that the main and distributing canals shall be placed at the disposal of the general project, credits for the systems to be given in connection with their annual payments.

2. The New York canal interests be absorbed into the general project on the basis of the actual value of its existing works, or

by condemnation of right of way through such portion of the canal as may be required.

3. The Payette-Boise Water Users' Association acquire all existing rights to damsite and power privilege on the Payette River at Black Rock Canyon.

The Water Users' Association has given assurance that the amount charged to maintenance need not be paid out of the reclamation fund, but that the irrigators will be willing to bear the cost of maintenance of the system; hence the actual outlay from the reclamation fund would be reduced to \$2,596,000.

Conditional upon the fulfillment of the foregoing recommendations, we recommend the transfer of \$1,000,000 from the amount set aside for the Minidoka work to the Payette-Boise project and the allotment of \$1,500,000 additional, making a total of \$2,500,000 for the construction of these works.

Respectfully submitted.

(Signed) F. B. GOODING,
Governor of Idaho.
JAS. STEPHENSON, Jr.,
State Engineer of Idaho.
H. N. SAVAGE,
Supervising Engineer.
A. J. WILEY,
Consulting Engineer.
D. W. ROSS,
District Engineer.
H. A. STORRS,
Electrical Engineer.

UNITED STATES GEOLOGICAL SURVEY,
RECLAMATION SERVICE,
March 24, 1905.

The Honorable, the SECRETARY OF THE INTERIOR.

SIR: During the summer of 1903, preliminary surveys made by the Reclamation Service indicated the feasibility of reclaiming a large body of desert lands in southwestern Idaho in the Payette-Boise valleys. Upon petition by more than 1,200 landowners, representing about 93,000 acres of land in the project, further surveys were ordered made during 1904 for the purpose of determining the character of the necessary works and the cost of constructing the same. Withdrawals were also made under the provisions of the reclamation act. These surveys were finished in November, 1904, and estimates of cost and preliminary plans were made and have recently been considered by a Board of Engineers of the Reclamation Service.

The project provides for the reclamation of about 372,000

acres, 300,000 of which are now in a desert condition. About 71,000 acres are public lands, subject to entry under the conditions of the reclamation act. About 46,000 acres have been entered, subject to the provisions of that act, since the lands were withdrawn. About 60,000 acres belong to the State of Idaho, and the remainder, about 195,000 acres, are in private ownership, held in tracts averaging about 100 acres each.

Ample storage facilities on the headwaters of the Payette River are available and can be developed at reasonable cost. Additional storage on the Boise River and in its valley proper can also be obtained to supplement the normal flow of the streams from which the water for this project is to be furnished.

About 100,000 acres of lands within the limits of the project are already irrigated through individual and community effort and private enterprise; but this development has not been planned on comprehensive lines, and the work contemplated by those interested does not provide for the full development of the natural resources of these valleys. The plans which must necessarily be adopted in order to accomplish the best results are, on account of the magnitude of the undertaking, beyond the reach of community effort, and do not offer an attractive field for the investment of private capital. These plans can only be carried to completion in their entirety with the help of the government.

The estimated cost of the entire system is about \$11,000,000, and the charge to be made for the lands which have now no facilities for irrigation will be about \$30 per acre.

This estimate includes the value of existing works which would be utilized, but for which the government is not required to pay, and also an allowance for necessary expenses for maintenance and operation, leaving about \$8,000,000 to be provided from the reclamation fund for construction and purchase of rights of way.

A water users association has recently been organized and final contracts have been entered into with more than 1,600 landowners of the Payette and Boise valleys, representing 155,000 acres of land. This represents about 80 per cent of the lands held in private ownership under the project.

From the present rate at which these contracts are being signed, the remainder of the lands will soon be included. The State of Idaho, by recent act of the Legislature and through its State Land Board, has provided for cooperation with the Reclamation Service; so at the present time the following lands, amounting to 332,000 acres, about 90 per cent of the total area, are either directly or indirectly bound to the project:

	Acres
Lands in private ownership	155,000
Public lands subject to entry under the conditions of the reclamation act	117,000
State lands	60,000
Total	332,000

A Project Board, consisting of engineers of the Reclamation

Service, met at Boise, Idaho, February 15, 1905, for the consideration of this project, and after discussing the plans with the Governor and the State Engineer, Directors of the Water Users Association, and representatives of the principal irrigation communities, and with the present condition of the reclamation fund in mind, recommended that construction be begun on such portion of the project as would require a comparatively small allotment from the reclamation fund, but which, while forming a part of the whole, would rest upon a sound financial basis, and be complete in itself.

In general, the plan proposed to be carried out is as follows:

(a) The acquisition of various rights of way, among them reservoir sites on Deer Flat and Payette River, to be arranged for in cooperation with the Water Users Association.

(b) The enlarging and extending of one of the upper canals of the valley, in order to fill the Deer Flat Reservoir.

(c) The construction of Deer Flat Reservoir and such distributing system as will provide for the delivery of water to the lands tributary thereto.

Aside from the fact that this project has been found feasible and will provide for the development of one of the most fertile sections in the State, it is important that it should be taken up at once because the local conditions require some prompt action to supplement the present water supply of these valleys, and unless the private lands in Deer Flat are acquired for reservoir purposes, they will become one of the important parts of an irrigated area which will be developed by private enterprise, and the value of the lands would increase so greatly that their use for reservoir purposes would become practically impossible in the future.

It is recommended that this project be taken up along the general lines hereinbefore detailed, and that this office be directed to prepare for construction the particular portion outlined. This is such portion of the project as is contemplated by section 4 of the reclamation act; namely, such portion or section as it may be practicable to construct and complete as part of the whole project.

The estimated cost of this portion of the work and the necessary rights of way is about \$1,300,000, and approximately 126,000 acres of land will be immediately benefited, some portions of which are now wholly without irrigation.

This amount is available from the reclamation fund, and it is recommended that the same be set aside for the Payette-Boise Project.

Very respectfully,

(Signed) CHARLES D. WALCOTT,
Director.

OFFICE OF THE SECRETARY,
Washington, March 27, 1905.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: I have before me your letter of the 24th instant in which you have set forth the facts concerning the investigations in connection with the Payette-Boise Project, Idaho, under the act of June 17, 1902—32 Stat. 388.

You have stated that the project provides for the reclamation of 372,000 acres of land, 300,000 acres of which are now in a desert condition; that about 71,000 acres are public land, subject to entry under the act mentioned, and that about 46,000 acres have been entered subject to the provisions of that act since the withdrawal of the lands; that about 60,000 acres belong to the State of Idaho, and that the remainder, about 195,000 acres, is now in private ownership, held in tracts averaging about 100 acres each.

Your letter shows that ample storage facilities are available on the headwaters of the Payette River, and that additional storage on the Boise River and its valley proper can also be obtained to supplement the normal flow of the streams from which the water for the project is to be furnished. You have referred also in your letter to the fact that a Water Users' Association has recently been organized in that locality, representing about 155,000 acres of land, and that the State has provided for co-operation with the Reclamation Service.

You have set forth in your letter the plan proposed to be carried out involving the acquisition of various rights of way, enlarging and extending of canals and the construction of the Deer Flat reservoir. In conclusion you have stated that aside from the fact that the project has been found feasible, it will provide for the development of one of the most fertile sections of the State and that it is important that the project should be begun at once.

You have accordingly recommended that the project be entered into along the lines you have detailed, and that your office be directed to prepare for construction the particular portion of the project outlined; also that \$1,300,000 be set aside for the project.

I have considered the facts and recommendations covered by your letter, and I hereby set aside from the fund mentioned the sum of \$1,300,000 for the Payette-Boise project, Idaho, and direct that you take action with respect to this project along the lines and with respect to that portion of the project covered by your recommendations and suggestions.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

ARROWROCK DAM

UNITED STATES RECLAMATION SERVICE,
Boise, Idaho, December 13, 1910.

THE DIRECTOR,
U. S. RECLAMATION SERVICE,
Washington, D. C.

SIR: The undersigned Board of Engineers has made a study of the water supply problem of the Boise project and has at this meeting made examination of the proposed reservoir site on the Boise River, upon which investigations have been in progress during the past year.

Borings have been made at two possible sites for a storage dam, known respectively as "Hell Gate" and "Arrow Rock." A large amount of diamond drill cores were inspected, which were taken from the various sites examined in the basin of the Boise River.

About 243,000 acres of irrigable land in the Boise Valley now lies under ditches which have been completed in the years past, or are now approaching completion by the Reclamation Service, and for which the Boise River cannot furnish a full season's water supply without storage. Of these, 164,000 acres are new lands, and 79,000 acres are old lands under old ditches with an incomplete water supply.

Storage has already been provided by the Reclamation Service by the construction of the Deer Flat Reservoir which is fed from the Boise River through the New York Canal and an extension thereof which has been in service the past year and is now in part undergoing enlargement. This will be available for service the coming spring. The storage capacity of Deer Flat Reservoir is about 170,000 acre-feet, which is manifestly inadequate for the supply of 243,000 acres, of which area, moreover, a large amount cannot be served by the Deer Flat Reservoir.

A detailed study of the requirements of the valley and the water supply of the Boise River has been made by Mr. F. W. Hanna, the project engineer, and submitted on August 25, 1910, to the Board of Army Engineers who recently visited this region. This has been examined and discussed. While some differences regarding details developed during this discussion with Mr. Hanna, the Board is of the opinion that Mr. Hanna's conclusions are essentially correct and contains no large errors that can at present be corrected. These conclusions are, therefore, taken as a basis of the essential elements of the storage problem of this basin and are the basis of the conclusions herein stated.

The figures and facts assembled leave no doubt in our minds as to the necessity of storage works on the Boise River and the superiority of storage at, or near, Arrow Rock over any other part of the Boise River drainage area. The facts leading to this conclusion are that the investigations indicate that the acre-foot cost of storage at other points would be greater than that on the main stream above mentioned. Furthermore, the requirements of the valley are for the entire supply of the Boise River during the low years and this cannot be intercepted at any point above the junction of the North and South Forks. For this reason we have concluded that no reservoir in the drainage area of this stream is at present within the realm of consideration except the one on the main stream below the junction of the North and South Forks. For this reservoir site the two possible damsites referred to above; i.e., Hell Gate and Arrow Rock, have been carefully compared and considered, and in the light of present information, the latter appears the safe and more feasible.

The principal question at present calling for early decision is the amount of storage which it is advisable to provide. The site is by no means a favorable one, topographically considered, as the unit cost of storage capacity will be very high. The cost is, however, in our opinion, within the limits of feasibility, but must be carefully taken into consideration in the determination of the amount of storage to provide. The lowest parts of the foundations will be about 90 feet below river level and a very high dam will be necessary to provide the required storage. The studies made by Mr. Hanna, and given on page 29 of his report to the Board of Army Engineers, indicate a requirement of river storage of over 200,000 acre-feet in 6 years out of 10. In 4 years out of 16 there would have been a shortage in total water supply furnished by the Basin, even if all could have been controlled. These shortages, however, are all relatively small, except one, which amounts to approximately 30 percent of the season's supply and occurred in the year 1905. As this is the lowest in a record of 16 years, we do not deem this shortage a very serious matter, but one which it is desirable to reduce by storage, if practicable.

It is to be noted also that this study of Mr. Hanna's does not include the storage for the old lands, which would require 66,000 acre-feet additional to the quantities given in his table. These old lands have been eliminated on account of the doubt whether they will take stored water, and the possibility that they could be served by providing additional storage at other points.

Excepting the year 1905 as being extraordinary, a storage capacity of 231,000 acre-feet on the Boise River would provide for all the years given in the record, except the years 1895 and 1902, and in these years there would have been a shortage of 33,000 and 15,000 acre-feet, respectively. Any smaller quantity of storage would not only increase the shortage in 1895, 1902, and 1905, but would also make a shortage in 1898, and such reduction would also make shortage in other years.

Were it not for the unprecedented height of dam and great cost, we would have no hesitancy in recommending that a storage

capacity of 230,000 acre-feet, or even more, be provided. For such storage is not only greatly needed but is best provided by this reservoir and at much less per acre-foot than the average cost of storage in a smaller reservoir.

We are of the opinion that an available capacity of at least 200,000 acre-feet should be provided. This, according to our present information, will probably cost approximately \$6,250,000. This cannot be regarded as a final estimate, as investigations are not yet completed, but is in our opinion the assumption upon which present action should be taken. This requires a reservoir dam with storage depth of about 246 feet, upon a foundation which is, on an average, about 60 feet below river level, with indications of smaller areas at about 30 feet greater depth. The only feasible material of which to construct such a dam in this locality is concrete, for which all the necessary materials are abundant in the vicinity, except cement, and this can be brought in at reasonable cost. The large quantity of cement required for such a structure, together with the gates, construction equipment and miscellaneous supplies, will require transportation of a large tonnage of freight, and for this purpose it is necessary to construct a railroad up the river from Barberton, a distance of about 17 miles.

The large amount of power that this work would require can be mainly provided by the development of the power possibilities at the Boise River diversion dam. At the present time it seems desirable to develop at this site about 1,500 kilowatts.

The exact height of the dam need not be determined until preliminaries have been completed, which will probably take nearly a year. In the meantime the progress of investigations and continued studies of the problem by the engineers in charge will determine the most advisable capacity of storage to provide, in view of the cost and all physical difficulties.

With present information this Board feels justified in making the following recommendations:

1. That a storage dam at Arrow Rock on the Boise River be authorized as a part of the Boise irrigation project.

2. That the Supervising Engineer be authorized to enter into negotiations with the Oregon Short Line Railroad or the Barber Lumber Co., or both, with a view to securing the best possible terms for the construction of a railroad from Barberton to the proposed damsite.

3. That in case no advantageous terms can be made with the above, or any other parties, for the construction of the railroad, he be authorized to take preliminary steps for the construction of the same with public funds.

4. That the construction of a power plant and transmission line with a capacity of about 1,500 kilowatts at the Boise River diversion dam be authorized.

5. That the supervising engineer be instructed to make plans and estimates for the necessary construction plant with a view to its early purchase and shipment to the damsite as soon as the railroad can be completed.

6. That the construction of the necessary diversion tunnels be authorized.

7. That the supervising engineer be authorized to undertake the sawing of sufficient lumber at the most available point for the construction of camp, the timbering of the diversion tunnel and other immediate requirements of the project. The amount of lumber to be only such as will probably be needed before the completion of the railroad.

8. That a continuation of studies upon the problem be authorized with a view to the complete development of all facts necessary for the determination of proper plans and dimensions of the storage dam contemplated.

9. That the reconstruction, above the proposed water line, of the wagon road that now passes through the reservoir site, be authorized.

10. That the purchase of the necessary rights-of-way for a railroad reservoir site, transmission line, and telephone line be immediately authorized.

11. That the construction of a telephone line for use during the construction and operation be authorized.

12. That a tentative allotment for the above purposes of \$1,000,000 be made immediately available.

The long time necessary for the construction of this dam and the urgent and growing need of stored water in the Boise Valley, make prompt action as above recommended very important.

Respectfully submitted.

(Signed) A. P. DAVIS,
Chief Engineer.

(Signed) W. H. SANDERS,
Consulting Engineer.

(Signed) A. J. WILEY,
Consulting Engineer.

(Signed) F. E. WEYMOUTH,
Supervising Engineer.

(Signed) CHAS. H. PAUL,
Engineer.

UNITED STATES RECLAMATION SERVICE,
Washington, D. C., December 28, 1910.

OFFICE OF THE DIRECTOR.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: With reference to the Boise project, Idaho, it is now important to expedite work on the storage reservoir on Boise River. Investigations have reached a point where it is believed that definite authority should be granted to begin this work.

Enclosed herewith is copy of board report dated December 13, 1910, the conclusions of which are concurred in by this office. In accordance with this report the following recommendations are presented for approval:

1. That a storage dam at Arrow Rock on Boise River be built as part of the Boise project.

2. That negotiations be entered into with a view to securing the best possible terms for the construction of a railroad to the proposed dam site.

3. That in case no advantageous terms can be made, that preliminary steps be taken for construction of a suitable road, this being part of the essential preliminary work on the dam.

4. That a suitable power plant and transmission line be built for construction purposes.

5. That the necessary preliminary steps be taken for acquiring construction plant.

6. That the diversion tunnels be begun.

7. That the lumber necessary be sawed or procured near the site before the completion of the railroad.

8. That studies be continued for the determination of the details of proper plans for the storage dam.

9. That the wagon road which now passes through the reservoir site be reconstructed above the proposed water line.

10. That necessary rights of way be secured.

11. That the telephone line be built.

12. That there be tentatively allotted \$1,000,000 for the above purposes to be made immediately available.

Very respectfully,

(Signed) F. H. NEWELL,
Director.

JANUARY 6, 1911.

Approved and authority granted as requested.

(Signed) R. A. BALLINGER,
Secretary.

BLACK CANYON DAM

DEPARTMENT OF THE INTERIOR,
UNITED STATES RECLAMATION SERVICE,
Washington, June 26, 1922.

The SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: On the 18th day of November, 1921, the United States entered into a contract with the Emmett Irrigation District in southern Idaho for the construction of a dam on the Payette River at a point known as Black Rock Canyon. This will be a diversion dam to take the place of the long canal built in the canyon and heading about 16 miles above the dam site.

The canal serves a large area of highly developed land including many orchards and other permanent improvements depending upon the water supply furnished by the canal mentioned. A part of the canal in the canyon was cheaply constructed and is in very unsafe location. It involves great trouble and expense for maintenance and its complete breakdown is feared any time. It therefore is important that the dam which is to take its place be completed and placed in service at the earliest possible day.

The contract for the construction of this dam provides for an option for its use on the Boise project for carrying the waters of Payette River into the valley of the Boise River on the North side for which the water supply of the Boise River is not sufficient.

A review of our finances indicates that without stopping or materially curtailing operations already under way it will be possible to allot for expenditure during the fiscal year ending June 30, 1923 the sum of \$600,000, which is approximately one-half of what will be necessary for the completed work. It is respectfully requested that an allotment from the appropriation for Boise project of \$600,000, be authorized for the construction of the Black Canyon dam.

Very respectfully,

(Signed) A. P. DAVIS,
Director.

Approved June 26, 1922.

(Signed) E. C. FINNEY,
First Assistant Secretary.

PAYETTE DIVISION—DEADWOOD DAM

OFFICE OF THE SECRETARY,
Washington, October 18, 1928.

THE PRESIDENT,
The White House,

MY DEAR MR. PRESIDENT: The act making appropriations for the Interior Department for the fiscal year 1928, approved January 12, 1927, provides \$416,000 for continuation of investigation and beginning construction of the Payette Division of the Boise project, Idaho, and the act making appropriations for the Interior Department for the fiscal year 1929, approved March 7, 1928, provides \$400,000 for continuation of construction of this division.

Section 4 of the act of June 25, 1910 (36 Stat., 835), provides in effect that after the date of that act no irrigation project to be constructed under the act of June 17, 1902 (32 Stat., 388), and acts amendatory thereof or supplementary thereto, shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924 (43 Stat., 701), provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

The feature under consideration for immediate construction as a part of the Payette Division of the Boise project requiring investigation and report under Subsection B, Section 4, Act of December 5, 1924, *supra*, is discussed in the order presented in that subsection.

The building and operation of the Deadwood reservoir is an intermediate step in the carrying out of the construction of the Payette division of the Boise project, the construction of canals for the irrigation of this division to be delayed until funds therefor are available.

STORAGE PLAN

A reservoir of 160,000 acre-feet capacity is proposed on the

Deadwood River, a tributary of the Payette River, 60 miles northeast of Boise, Idaho. This reservoir will be used to supply additional water for the Black Canyon reservoir, affording a regulated flow for the power plant at Black Canyon, to be used by the Bureau of Reclamation in supplying cheap power for pumping on the Gem Irrigation District and on five other districts, smaller than the Gem, whose development is threatened because of the very heavy cost of pumping, varying from \$7 to \$10 an acre. Under present conditions there is a serious shortage of water for power purposes during the peak of the irrigation season in July and August, and the output of the power plant is greatly reduced during this period. The construction of the Deadwood reservoir will relieve this condition and make 8,000 kilowatts of firm power available throughout the irrigation season. Additional power is also needed for the construction of the Owyhee dam and irrigation works, estimated to cost \$18,000,000. The revenues from the sale of this power are known to be ample to return the entire cost of construction of the reservoir within 40 years. Consequently there is no need of entering into contracts with irrigation districts for the repayment of this cost, or of any other guarantees of solvency.

ENGINEERING FEATURES

The Deadwood dam will be of arch design, 600 feet long and 160 feet in maximum height, containing 50,000 cubic yards of concrete. The structure will be founded on granite. The Black Canyon diversion dam already constructed is a gravity section concrete structure raising the river level 90 feet and has been successfully operated for over four years.

CONSTRUCTION COST

The estimated construction cost of the Deadwood reservoir is \$1,200,000, of which \$800,000 has already been appropriated.

FINDING REGARDING FEASIBILITY OF PROJECT

The foregoing data justify the conclusion that the Deadwood reservoir is feasible from an engineering and economic standpoint, and I accordingly so find and declare.

PROBABLE RETURN TO RECLAMATION FUND OF COST OF CONSTRUCTION

The next declaration required is that the cost of construction will probably be returned to the reclamation fund.

As stated above, the power revenues will be ample to return the cost of construction within forty years. I accordingly recommend the approval of the construction of the Deadwood reservoir

and the issuance of the necessary authority to this Department to make contracts for the construction and to proceed with the work.

Sincerely yours,

(Signed) ROY O. WEST,
Secretary.

Approved: October 19, 1928.

(Signed) CALVIN COOLIDGE,
President.

PAYETTE DIVISION

OFFICE OF THE SECRETARY,
Washington, November 20, 1935.

THE PRESIDENT,
The White House,

MY DEAR MR. PRESIDENT: The original irrigation plan for the development of the Boise project contemplated the construction of an irrigation system to serve the lands now included in the Payette Division.

The division comprises lands in the area between the Boise and Payette Rivers extending westward to the Snake River and is located generally between the cities of Caldwell and Payette, Idaho. The division is bounded on three sides by highly developed irrigated areas and is traversed by two paved highways and one railroad. The lands are well situated for successful irrigation; the soil is excellent and there are no serious drainage problems. The division contains an irrigable area of 47,000 acres, of which 26,000 acres will receive water by gravity flow and the remaining area will be under pumping lifts up to a maximum of 100 feet. The total estimated cost of construction of the irrigation system, including storage, diversion dam, power plant, pumping plants, canals and tunnels, drainage ditches, etc., required to supply water to the entire irrigable area of the division is approximately \$7,500,000. Of this system, the diversion dam has been built in 1923-1924 for joint use with the Emmett Irrigation District, and the power plant was constructed in 1925 to produce power for pumping on the Owyhee project until the power should be needed on the Payette division.

Under Presidential approval dated October 19, 1928, the Deadwood storage reservoir was constructed in 1929-1930 to supplement the water supply for the power plant, with its cost to be repaid from power revenues. Either this reservoir can be converted

to the use of the Payette Division and another source of power secured for pumping on the Owyhee project or another reservoir of similar capacity—for which suitable sites and water supply are available on the Payette River—can be provided for the Payette division. The estimated cost of the remaining work required, not including a reservoir, is approximately \$5,000,000.

Water, now running to waste in the Payette River, is available for direct diversion or storage in sufficient amount for the irrigation of the lands. The lands of the division are included within the boundaries of the Black Canyon Irrigation District, an irrigation district created, organized and existing under the laws of the State of Idaho.

The District has entered into a contract with the United States, dated October 3, 1927, to repay the cost of an irrigation system with a limit of expenditure for irrigation works of \$8,160,000, which cost the District has agreed to pay in thirty-nine annual installments beginning with December 31 after Public Notice by the Secretary of the Interior that water is available for irrigation use.

The Supreme Court of the United States in the Parker Dam decision (*United States v. State of Arizona*, 295 U.S. 174) indicated that Section 4 of the act of June 25, 1910, 36 Stat. 835, is applicable to irrigation projects constructed under the National Industrial Recovery Act, and this report upon the Payette division of the Boise project is made to you under said statute of 1910 and under Subsection B of Section 4 of the act of December 5, 1924, 43 Stat., 701.

Section 4 of the act of June 25, 1910, provides, in effect, that after the date of that act no irrigation project to be constructed under the act of June 17, 1902, 32 Stat., 388, and acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924, 43 Stat., 701, provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

About 29 miles of main canal is required to reach the irrigable lands of the division and this canal follows roughly the location of the existing south side canal of the Emmett Irrigation District so that construction of the new canal can not be continuous and rapid but must be built in sections, part outside of the irrigation season in order not to interrupt service through the old canal. The allotment of \$1,000,000 now available under the Emergency Relief Appropriation Act of 1935 to begin construction on the canal system for the division is adjusted to the necessary program

and will provide for construction of those sections that can be built prior to the end of the irrigation season of 1936.

The good record of the Boise project during the past 25 years, from an agricultural standpoint, justifies the belief that the economic benefits to be derived from the ultimate development of the Payette division, as one of the best divisions of the Boise project, will lead to its completion with appropriations from the Reclamation Fund, in the event further appropriations are not made from P.W.A. funds for the purpose.

The contract for repayment of cost of construction contains such provisions as are necessary to safeguard the interests of settlers against speculation in the unimproved lands of the division.

Surveys have been made, and the land has been classified, and I find that the project is feasible; that the land watered thereby is well adaptable for actual settlement and farm homes; that the land owners benefited by the project will be able from the agricultural produce of the lands irrigated to return the cost of the development and that the project will probably return the cost thereof to the United States.

Construction of the proposed irrigation works will furnish employment to large numbers now unemployed and further the purpose and intent of the Act of Congress of June 16, 1933.

I recommend that the project be approved and that the necessary authority be issued to the Department to make contracts for construction of the project and for repayment of the cost thereof by the lands benefited.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved December 19, 1935.

(Signed) FRANKLIN D. ROOSEVELT,
President.

ANDERSON RANCH DAM

PROVISIONS OF INTERIOR DEPARTMENT APPROPRIATION ACTS, 1939 and 1941

[Extract from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1939, and for other purposes. (Act of May 9, 1938, 52 Stat. 291, 321, Public Law 497, 75th Cong., 3d sess.)

* * * That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, for the De-

partment of the Interior for the fiscal year ending June 30, 1939, namely:

* * * * *

Construction: For continuation of construction of the following projects in not to exceed the following amounts, respectively, to be expended from the Reclamation Fund under the same general conditions and in the same manner and for the same objects of expenditure as specified for projects hereinbefore in this act under the caption "Bureau of Reclamation," and to be reimbursable under the Reclamation law.

* * * * *

Boise project, Idaho, Payette division, \$500,000; Twin Springs Dam and Snake River pumping plant, \$750,000.

[Extract from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1941, and for other purposes. (Act of June 18, 1940, 54 Stat. 406, 435, Public Law 640, 76th Cong., 3d sess.)

* * * * *

Boise project, Idaho, Payette division, \$900,000; the sum heretofore appropriated for construction of the Twin Springs Dam and Snake River pumping plant shall remain available for construction of either or both of the same or such other project works on the Boise River or its tributaries as may be found by the Secretary of the Interior, following current investigations, to be more feasible.

BUREAU OF RECLAMATION,
Washington, June 24, 1940.

The SECRETARY OF THE INTERIOR.

SIR: During the period from 1904 to 1909 the Bureau of Reclamation constructed the Arrowrock and Deer Flat Reservoirs, distributing canals, and a drainage system for the Boise Project in Idaho of 166,000 acres. Adjacent to this project there is an area of 174,000 acres which has been irrigated for a much longer period than the Federal project. Both areas, amounting to a total of 340,000 acres, have suffered water shortages in recent years.

The engineers of the Bureau of Reclamation have for some time been making investigations of the possibilities of furnishing supplemental water to eliminate these shortages. In 1938 a proposal was submitted which included the construction of the Twin

Springs dam and power plant on the Middle Fork of the Boise River and a pumping plant on the Snake River, the latter to furnish water to the lands of the Deer Flat Division of the Federal project. An appropriation of \$750,000 was made available in the 1938 Interior Department appropriation bill for the commencement of construction of this development, the total estimated cost of which is \$11,296,000. Before construction was initiated the Department of Agriculture and the Corps of Engineers, while making flood control surveys, had found that the Anderson Ranch site on the South Fork of the Boise River was more desirable from a flood control standpoint than the Twin Springs site. The three agencies thereupon made a study of the relative merits of the two sites for the purposes of flood control, irrigation, power development, and silt control.

The report of the Bureau engineers on the two developments is transmitted herewith. Their conclusions are that the more desirable project is the construction of a dam on the South Fork of the Boise River at the Anderson Ranch site and the altering of the outlet works of the existing Arrowrock Dam on the Boise River as a flood control feature. The storage of water in the Anderson Ranch Reservoir will practically eliminate the shortages for the 340,000 acres in the Boise Valley in all years except those similar to 1931. The development is greatly desired by local irrigation interests and would materially improve their economic status. Based on repayment in forty years without interest, the total annual charge to irrigation will amount to \$116,000, which can readily be paid by the irrigators.

The estimated cost of the project is \$13,100,000. In the Interior Department appropriation act for the fiscal year 1941, the Congress provided that the funds previously made available for the Twin Springs development "shall remain available for construction of either or both of the same or such other project works on the Boise River or its tributaries as may be found by the Secretary of the Interior, following current investigations, to be more feasible." This provision makes this money available for the Anderson Ranch Reservoir.

The water studies made by the engineers of the Bureau indicate the desirability of installing a power plant of 20,000-kw. capacity. With this installation, about 104,000,000 kw-hrs. of electrical energy can be generated. A large block of this power, about 14,000,000 kw-hrs., will be required for irrigation pumping in the Boise and Payette Valleys and the Owyhee Project, a development of the Bureau of Reclamation. The power in excess of that needed for irrigation pumping can be absorbed in the surrounding power market area, and the Idaho Power Company has already indicated a desire to purchase it. Owing to the location of the Arrowrock Reservoir down-stream from the Anderson Ranch site, it will be possible to develop the firm power at the Anderson Ranch plant without the loss of run-off during the non-irrigation season.

The Department of Agriculture has made studies of erosion and silting conditions in the Boise Valley from which it is concluded that 30,000 acre-feet of the dead storage space in the pro-

posed reservoir will prevent annual siltation damages amounting to \$23,000.

The Corps of Engineers, War Department, has made a flood control survey of the Boise River Basin. During the progress of the investigations, there was close cooperation between the field staffs of the two agencies. The report of the Division Engineer proposes the construction of the Anderson Ranch Reservoir to the same capacity considered by the Bureau of Reclamation and recommends the same allocations for storage space. A conference between the representatives of the Bureau and the Board of Engineers was held on May 24, 1940, at which time the few small differences in the reports of the two agencies were adjusted.

* * * * *

The new repayment contract will be negotiated largely with the same group that is now repaying the cost of the present works. The operation and maintenance for any new construction will be supplementary to that already in force. In view of this situation there should be no doubt that the Bureau of Reclamation should construct and operate the proposed works.

The benefits to be derived from the construction of the Anderson Ranch Reservoir exceed the annual costs, and the project clearly meets all the requirements of feasibility and authorization under Section 9 of the Reclamation Project Act of 1939. Through the cooperation between the field staffs of the Bureau of Reclamation and the War Department, a satisfactory and fair allocation has been arrived at for flood control purposes. I recommend that the report and a Finding of Feasibility on this project be submitted to the President and to the Congress in compliance with the provisions of the Reclamation Project Act of 1939.

Respectfully,

(Signed) JOHN C. PAGE,
Commissioner.

OFFICE OF THE SECRETARY,
Washington, June 25, 1940.

THE PRESIDENT

The White House,

(Through the National Resources Planning Board).

MY DEAR MR. PRESIDENT: There is transmitted herewith a letter of June 24, 1940, from the Commissioner, Bureau of Reclamation, submitting a report on a multiple-purpose project in the Boise Basin, Idaho.

By reference to the report, it will be noted that it proposes to substitute the Anderson Ranch reservoir for the Twin Springs development. A proposal had been made to build the Twin Springs

development, at an estimated cost of \$11,296,000, and an appropriation for commencement of construction was contained in the 1938 Interior Department Appropriation Act. Subsequent investigations by the Corps of Engineers, the Department of Agriculture, and the Bureau of Reclamation indicated that the Anderson Ranch site was more desirable for multiple-purpose uses. The 1941 Interior Department Appropriation Act contains language whereby the appropriation made previously for the Twin Springs development can be used for the Anderson Ranch reservoir. Consequently, funds are now available to commence its construction.

The proposed plan contemplates spending \$13,100,000 for the construction of the Anderson Ranch Dam and Power House on the South Fork of the Boise River and for the making of certain alterations in the outlet works of the existing Arrowrock Dam on the Boise River. The accomplishment of this work will provide a supplemental water supply for 340,000 acres of irrigated lands in the Boise Valley. The irrigation works for 166,000 acres of this area were constructed several years ago by the Bureau of Reclamation. These works included the Arrowrock Dam and the necessary canals, laterals, and drainage systems. In addition to furnishing supplemental water to the lands in the Boise Valley, the proposed project will provide for the generation of about 104,000,000 kilowatt-hours of firm and secondary electrical energy, and for a large measure of flood control throughout the Boise Valley. The dead storage space in the reservoir will furnish the required silt control and in addition will provide a permanent lake which will conserve fish life and provide recreational facilities.

Through consultation and agreement with the Chief of Engineers, representing the Secretary of War, \$5,050,000 of the cost of constructing the project has been allocated to flood control, with no reimbursement contemplated. The other allocations include \$4,650,000 to irrigation, to be repaid under the Reclamation Law in forty years without interest, and \$3,400,000 to power development, to be repaid through the sale of firm and secondary power. These allocations equal the estimated cost of the project. This is essentially a multiple-purpose project as it is economically infeasible to obtain benefits separately for flood control, irrigation, power or silt control.

I find that the project is feasible from an engineering standpoint, that it will be economically beneficial and that repayment of the reimbursable costs can be anticipated with assurance. It is consequently authorized for construction under the provisions of Section 9 of the Reclamation Project Act of 1939, and I recommend that its construction be started as soon as practicable with the funds already made available.

Unless you have objections, the letter and report will be transmitted to the Congress in accordance with the provisions of the Reclamation Project Act of 1939.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE,
Washington, July 8, 1940.

Memorandum for the SECRETARY OF THE INTERIOR.

I have no objection to your transmittal to the Congress of the reports on the "Twin Springs and Anderson Ranch Reservoir sites—Boise Project, Idaho", submitted with your letter of June 25, 1940.

Although I realize that funds for initiation of construction of the Anderson Ranch project are available for expenditure under the terms of the Interior Department Appropriation Acts, 1938 and 1941, the present demands upon the Federal Treasury for purposes of national defense make it unwise to start a project of that magnitude at this time. I therefore request that you defer indefinitely the initiation of construction of the project.

(Signed) FRANKLIN D. ROOSEVELT,
President.

OFFICE OF THE SECRETARY,
Washington, July 22, 1940.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: I have received your memorandum of July 8, 1940, in which you state you have no objection to the transmittal to the Congress of the reports on the Twin Springs and Anderson Ranch reservoir sites on the Boise project in Idaho, but request that the initiation of construction of the project be deferred because the present demands on the Federal Treasury for purposes of national defense make it unwise to start a project of its magnitude at this time.

I do believe, however, that I should call your attention to the situation in the Boise Valley. The supplemental water supply to be provided by the proposed development is greatly needed there to prevent crop losses in practically every year. Although the necessity of conserving funds for national defense precludes construction at this time, the Anderson Ranch reservoir should be built as soon as practicable.

When more favorable conditions prevail and the project can be started, much delay in the commencement of actual construction

can be avoided by undertaking at this time the exploration of clay, sand and gravel deposits, the acquisition of rights-of-way, the clearing of the reservoir, the preparation of designs for the dam and power plant, the negotiation of repayment contracts and similar preliminary activities. This work could be completed for approximately \$400,000 of the \$750,000 appropriated and I am asking your approval for the expenditure of this amount.

This procedure would eliminate most of the obstacles to actual construction but would not create a commitment for additional funds at the present time. In addition, it would make ready a project on which a large number of men could be immediately employed if it became necessary on short notice to engage in an expanded program of public works to stabilize employment conditions.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE,
Washington, July 30, 1940.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: I have your letter of July 22, 1940, asking my approval for the expenditure of approximately \$400,000 of the balance of \$631,000 available for expenditure under the terms of the Interior Department Appropriation Acts, 1939 and 1941, for undertaking preliminary work in the construction of the "Twin Springs and Anderson Ranch Reservoir Sites, Boise project, Idaho."

You suggest that preliminary work done now would save delay in commencing actual construction at a later date, and indicate that there is an urgent need for a supplemental water supply for the Boise Valley.

You may proceed with those features of the preliminary work outlined in your letter, the expenditures therefor not to exceed \$400,000 in the fiscal year 1941. While releasing this amount for expenditure now, it should be understood that no commitment is being made with respect to the approval of an estimate of appropriation to begin actual construction at an early date.

Sincerely yours,

(Signed) FRANKLIN D. ROOSEVELT,
President.

OFFICE OF THE SECRETARY,
Washington, August 12, 1940.

THE PRESIDENT OF THE SENATE,
United States Senate.

SIR: I am transmitting herewith the Reclamation report on the Anderson Ranch Reservoir, Boise Project, Idaho.

The letter of June 24, 1940 to me, from Commissioner John C. Page of the Bureau of Reclamation, states that, "The benefits to be derived from the construction of the Anderson Ranch Reservoir exceed the annual cost, and the project clearly meets all the requirements of feasibility and authorization under Section 9 of the Reclamation Project Act of 1939."

My letter to the President dated June 25, 1940 stated, "I find that the project is feasible from an engineering standpoint, that it will be economically beneficial and that repayment of the reimbursable costs can be anticipated with assurance. It is consequently authorized for construction under the provisions of Section 9 of the Reclamation Project Act of 1939."

These letters, together with correspondence with the President on the subject of the Anderson Ranch Reservoir, are included in and are a part of the report which is enclosed. The report, therefore, includes the findings and the authorization contemplated in Section 9 of the Reclamation Project Act of 1939 on the Anderson Ranch Reservoir, Boise Project, Idaho.

Very truly yours,

(Signed) A. J. WIRTZ,
Acting Secretary of the Interior.

This report also was transmitted to the Speaker of the House of Representatives.

PROVISIONS OF INTERIOR DEPARTMENT APPROPRIATION ACT, 1942

[Extract from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1942, and for other purposes. (Act of June 28, 1941, 55 Stat. 303-304, Public Law 136, 77th Cong., 1st sess.)

* * * That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, for the De-

partment of the Interior for the fiscal year ending June 30, 1942, namely:

* * * * *

Construction: For commencement and continuation of construction, and for general investigations and administrative expenses, of the following projects in not to exceed the following amounts, respectively, to be expended from the Reclamation Fund in the same manner and for the same objects of expenditure as specified for projects hereinbefore in this act under the caption "Bureau of Reclamation", under the heading "Administrative provisions and limitations", but without regard to the amounts of the limitations therein set forth, all to be reimbursable under the Reclamation law, and to remain available until expended:

* * * * *

Boise project, Idaho, Payette division, \$1,500,000: Provided, That such part of the storage capacity of the Cascade Reservoir, and the costs thereof, shall be reserved for other irrigation or power developments in and adjacent to the Boise project, as shall be determined by the Secretary of the Interior.

BOULDER CANYON PROJECT

ARIZONA-CALIFORNIA-NEVADA

The All-American Canal system and Hoover Dam and Power Plant were declared feasible from an engineering standpoint by the Colorado River Board in its report of November 24, 1928, wherein the Board confirmed the findings of the Bureau of Reclamation, concurred in the selection of the dam site, and approved the plans. The project was authorized by the Boulder Canyon Project Act of December 21, 1928 (45 Stat. 1057).

ALL-AMERICAN CANAL SYSTEM

REPORT OF COLORADO RIVER BOARD

[Extracts from] Report of Colorado River Board on the Boulder Canyon Project to the Secretary of the Interior, Denver, Colorado, November 24, 1928.

The Board of Engineers and Geologists appointed in accordance with Resolution No. 65, Seventieth Congress, approved May 29, 1928, has the honor to submit the following report as to the matters enumerated in said Resolution, that were to be reported on prior to December 1st, 1928.

The duties of the Board, insofar as this report is concerned, are—

To examine the proposed site of the dam to be constructed under the provisions of H. R. 5773, Seventieth Congress, first session, and review the plans and estimates made therefor, and to advise him (the Secretary of the Interior) prior to December 1, 1928, as to matters affecting the safety, the economic and engineering feasibility, and adequacy of the proposed structure and incidental works.

The structures proposed in H. R. 5773, Seventieth Congress, are:

A dam and incidental works in the main stream of the Colorado River at Black Canyon or Boulder Canyon adequate to create a storage reservoir of a capacity of not less than twenty million acre-feet of water and a main canal and appurtenant structures located entirely within the United States connecting the Laguna Dam with the Imperial and Coachella Valleys in California;

The "incidental works" at the dam are construed to be a power-house with its equipment of turbines, generators and all appurtenant appliances needed in the generation and control of electric energy.

The "appurtenant structures" for the main canal are construed to be a higher dam at Laguna, an enlargement of the headworks and desilting basin, together with the necessary flumes, bridges, culverts and other incidental structures along the line of the canal.

THE COLORADO RIVER

The Colorado River, one of the large rivers of the country, drains an area of about 244,000 square miles and has a total length from source to mouth of about 1,700 miles.

Its total fall is over 7,500 feet, or an average fall of about 4.5 feet per mile. The average rainfall on the drainage area is about 10 inches, over thousands of square miles less than 5 inches, and the average annual run-off is less than $11\frac{1}{2}$ inches. Its main flow is derived from the melting of snow on the mountains of the upper basin. The principal characteristics of its flow are low waters during the autumn and winter months, with a normal flood from the melting snows, usually beginning late in April, reaching its maximum in June, and ending by the middle of August. This flow is modified and intensified by torrential floods of short duration, which come in general from its southern tributaries, and may occur during almost any month of the spring, fall or winter. Its flood flows afford by far the greater quantity of water produced by the stream, and must be conserved and impounded in order to be successfully utilized for water supply and power production. Floods of 200,000 second-feet are not unusual, and much larger ones have occurred.

ENGINEERING FEASIBILITY

The engineering feasibility of the proposed dam across the main stream of the Colorado River, at Black Canyon or Boulder Canyon, is basic.

Selection of Site

The Board examined both sites in question, studied the available data concerning them, the geological formations surrounding them and the seismic history of the region. Conclusions concerning these damsites are embodied in the following statement:

Boulder Canyon Site * * *

Black Canyon Site * * *

Comparison of the Two Sites * * *

There is no doubt whatever but that the rock formations of this site are competent to carry safely the heavy load and abutment thrusts contemplated. It is well adapted to making a tight

seal and for opposing water seepage and circulation under and around the ends of the dam. It insures successful tunneling, and, so far as the rock is concerned, the general safety and permanence of the proposed structures.

The Board is of the opinion that the Black Canyon site is suitable for the proposed dam, and is preferable to that of the Boulder Canyon.

* * * * *

The Main Canal and Appurtenant Structures

The bill provides for the construction of a canal connecting the Laguna Dam with the Imperial and Coachella Valleys, whereas the original estimate of \$31,000,000 applies only to a canal reaching the distribution system of the Imperial Valley. The revised estimate will include the cost of constructing that portion of the canal leading to the Coachella Valley.

The Imperial Valley receives its water for irrigation and domestic purposes from the Colorado River, by means of the Imperial Canal. The water is diverted from the River at Rockwood Gates, about one mile north of the International Boundary, and is thence carried in a canal through Mexican territory and back into the United States to the Imperial Valley, thus avoiding the high mesa and sand-hill country north of the International Boundary. In most of its 50-mile course in Mexico this canal follows the Alamo River channel which formerly led into the Salton Sea.

The main canal is to be entirely within the United States. Under the proposed plan, the water is to be diverted from the river at Laguna Dam, the present intake of the canal for the Yuma Irrigation Project, 23 miles by river above the intake of the Imperial Canal. This will allow water to be taken from the river at the higher elevation necessary to permit the canal to serve its purposes.

From the intake the proposed line of the main canal leads southwest to a point near the river just north of the International Boundary, thence west approximately parallel to that line, to a point about 10 miles west of Calexico, a total length of 75 miles, making connections with the Imperial Valley System. At a point on the east mesa a canal branches off and leads to the Coachella Valley.

Between the Colorado River and Imperial Valley the canal location, for a length of 10 miles, crosses a region of sand dunes, some of which reach a height of about 150 feet above the canal bed. For much of this distance the canal cut will be over 50 feet deep. The grade of this section of the canal is such that the water surface will be below the mesa level, and hence below the bases of the sand dunes. Winds above a velocity of 10 miles an hour cause a movement of the surface sand, which increases with the velocity of the wind, and special provision should be made to pre-

vent undue silting of the canal by the "blow sand," as well as for the removal of the sand that will drift into the canal prism. In order to observe conditions the Board visited the sand dune belt several times, once during a sandstorm. Although it is clear that difficulties are presented by the drifting sand, it is the opinion of the Board that it is feasible to construct, maintain and successfully operate the canal. The overcoming of these difficulties will affect the cost, which has been allowed for in the estimates.

The Board believes that the canal should be lined with concrete through the sand dune region and should be given a slope sufficient to carry the in-blown sand to a suitable place for deposit and removal.

* * * * *

ADEQUACY OF PROPOSED STRUCTURES

A dam of 550 feet above low water, across the Colorado River at Black Canyon, impounding 26,000,000 acre feet of water, will be adequate, in the opinion of the Board, to so regulate the flow of the lower Colorado as to control ordinary floods; to improve the present navigation possibilities; and to store and deliver the available water for reclamation of public lands and for other beneficial uses within the United States.

* * * * *

The adequacy of the proposed hydro-electric plant to generate sufficient power to make the project authorized a self-supporting and financially solvent undertaking, is treated in the section on Economic Feasibility.

THE WATER SUPPLY OF THE COLORADO RIVER

The flow of the Colorado River is one of the fundamental factors on which the success of this project depends. On the stream flow depends the amount of land that can be irrigated and the amount of power that can be generated. The information on which this flow has been estimated is inadequate to furnish an accurate or sound estimate on which to base an important project without using factors of safety sufficiently great to make such estimates conservative and safe. Since the water supply is such a vital element in the problem, the Board has inquired into the subject as thoroughly as the limited time would permit.

* * * * *

ECONOMIC FEASIBILITY

The time available for the investigation in preparation of this report has not been sufficient to permit the Board to go into all

phases of this subject in the detail necessary to fix its findings with the degree of exactness which might otherwise be practicable.

The Board believes, however, that it has been able to review the available data with sufficient thoroughness to warrant the conclusions expressed in this report.

* * * * *

Based on the foregoing and the shortage of power which will occur at low flow, the Board is of the opinion that if the Boulder Canyon Project is completed and put in operation, carrying as it does the costs of flood protection works and the All American Canal, it will be impossible to meet operation, maintenance, interest and a sufficient sinking fund to retire the cost of the project within a 50-year period.

It is obvious that the power which can be generated from Boulder Dam is a valuable resource. If the income from storage can be reasonably increased and the capital investment reduced by the cost of the All American Canal together with a reduction for all or a part of the cost properly chargeable to flood protection, it would be possible to amortize the remaining cost with the income from power.

COLORADO RIVER BOARD
(Signed) Maj. Gen. WILLIAM L. SIBERT,
Chairman.

CHARLES P. BERKEY,
DANIEL W. MEAD,
WARREN J. MEAD,
ROBERT RIDGWAY.

HOOVER DAM AND POWERPLANT

REPORT OF COLORADO RIVER BOARD

[Extracts from] Report of Colorado River Board on the Boulder Canyon Project to the Secretary of the Interior, Denver, Colorado, November 24, 1928.

The Board of Engineers and Geologists appointed in accordance with Resolution No. 65, Seventieth Congress, approved May 29, 1928, has the honor to submit the following report as to the matters enumerated in said Resolution, that were to be reported on prior to December 1st, 1928.

The Duties of the Board, insofar as this report is concerned, are:

To examine the proposed site of the dam to be constructed under the provisions of H. R. 5773, Seventieth Congress, first session, and review the plans and estimates made therefor, and to advise him (the Secretary of the Interior) prior to December 1, 1928, as to matters affecting the safety, the economic and engineering feasibility, and adequacy of the proposed structure and incidental works.

The structures proposed in H. R. 5773, Seventieth Congress, are:

A dam and incidental works in the main stream of the Colorado River at Black Canyon or Boulder Canyon adequate to create a storage reservoir of a capacity of not less than twenty million acre-feet of water and a main canal and appurtenant structures located entirely within the United States connecting the Laguna Dam with the Imperial and Coachella Valleys in California.

The "incidental works" at the dam are construed to be a powerhouse with its equipment of turbines, generators and all appurtenant appliances needed in the generation and control of electric energy.

The "appurtenant structures" for the main canal are construed to be a higher dam at Laguna, an enlargement of the headworks and desilting basin, together with the necessary flumes, bridges, culverts and other incidental structures along the line of the canal.

THE COLORADO RIVER

The Colorado River, one of the large rivers of the country, drains an area of about 244,000 square miles and has a total length from source to mouth of about 1,700 miles.

Its total fall is over 7,500 feet, or an average fall of about 4.5 feet per mile. The average rainfall on the drainage area is about 10 inches, over thousands of square miles less than 5 inches, and the average annual run-off is less than 1½ inches. Its main flow is derived from the melting of snow on the mountains of the upper basin. The principal characteristics of its flow are low waters during the autumn and winter months, with a normal flood from the melting snows, usually beginning late in April, reaching its maximum in June, and ending by the middle of August. This flow is modified and intensified by torrential floods of short duration, which come in general from its southern tributaries, and may occur during almost any month of the spring, fall or winter. Its flood flows afford by far the greater quantity of water produced by the stream, and must be conserved and impounded in order to be successfully utilized for water supply and power production. Floods of 200,000 second-feet are not unusual, and much larger ones have occurred.

ENGINEERING FEASIBILITY

The engineering feasibility of the proposed dam across the main stream of the Colorado River, at Black Canyon or Boulder Canyon, is basic.

Selection of Site

The Board examined both sites in question, studied the available data concerning them, the geological formations surrounding them and the seismic history of the region. Conclusions concerning these damsites are embodied in the following statement:

Boulder Canyon Site * * *

Black Canyon Site * * *

Comparison of the Two Sites * * *

There is no doubt whatever but that the rock formations of this site are competent to carry safely the heavy load and abutment thrusts contemplated. It is well adapted to making a tight seal and for opposing water seepage and circulation under and around the ends of the dam. It insures successful tunneling, and, so far as the rock is concerned, the general safety and permanence of the proposed structures.

The Board is of the opinion that the Black Canyon site is suitable for the proposed dam, and is preferable to that of the Boulder Canyon.

Danger from Earthquakes and Deformation

In former geologic times this district was subjected repeatedly to volcanism and deformation. These events must have been accompanied by earthquakes. Such evidence as there is, both to be observed in the field and to be gathered from records, indicates that these geological activities ceased long ago and that the region has been virtually undisturbed for a very long time. The district is recognized as having comparative freedom from present-day earth movements, and the conclusion is that danger from local earthquakes of enough violence to threaten a properly constructed dam in Black Canyon, is negligible.

REVIEW OF PLANS AND ESTIMATES

The Dam and Incidental Works

The Board is of the opinion that it is feasible from an engineering standpoint to build a dam across the Colorado River at Black Canyon that will safely impound water to an elevation of 550 feet above low water. The cost, however, will be greater than that contemplated in the project authorized in H. R. 5773.

The Dam

The dam proposed by the Bureau of Reclamation and assumed to be the one referred to in H. R. 5773, is of the gravity type, curved in plan, with allowable stresses as high as 40 tons per square foot.

It is the opinion of the Board that a dam of the gravity type is

suitable for the site in question, and that such a dam built across Black Canyon would be safe, provided the maximum stresses allowed do not exceed those adopted in standard practice.

The proposed dam would be by far the highest yet constructed and would impound 26,000,000 acre feet of water. If it should fail, the flood created would probably destroy Needles, Topock, Parker, Blythe, Yuma, and permanently destroy the levees of the Imperial District, creating a channel into Salton Sea which would probably be so deep that it would be impracticable to reestablish the Colorado River in its normal course. To avoid such possibilities the proposed dam should be constructed on conservative if not ultra-conservative lines. * * *

Permanent Spillway * * *

A permanent spillway utilizing the increased capacity of the diversion tunnels provided in the revised plans will make it practicable to prevent any expected flood from overtopping the dam.

Excavation for the Main Dam * * *

It is the judgment of the Board that it is feasible to make the required excavation for the permanent dam but it is their opinion that plans and estimates of cost should include provision for the control and handling of a considerable volume of water.

The Power Plant

While a power-house must be fitted to a particular site and its equipment must be designed and selected for the particular conditions which obtain at such site, the entire installation will nevertheless be largely standard, and offers no particular difficulties.

The Board is of the opinion that the plans proposed are feasible from an engineering standpoint. Questions of cost will be considered in another part of the report entitled "Estimates."

* * * * *

ADEQUACY OF PROPOSED STRUCTURES

A dam of 550 feet above low water, across the Colorado River at Black Canyon, impounding 26,000,000 acre feet of water, will be adequate, in the opinion of the Board, to so regulate the flow of the lower Colorado as to control ordinary floods; to improve the present navigation possibilities; and to store and deliver the available water for reclamation of public lands and for other beneficial uses within the United States.

* * * * *

The adequacy of the proposed hydro-electric plant to generate

sufficient power to make the project authorized a self-supporting and financially solvent undertaking, is treated in the section on Economic Feasibility.

* * * * *

ECONOMIC FEASIBILITY

The time available for the investigation in preparation of this report has not been sufficient to permit the Board to go into all phases of this subject in the detail necessary to fix its findings with the degree of exactness which might otherwise be practicable.

The Board believes, however, that it has been able to review the available data with sufficient thoroughness to warrant the conclusions expressed in this report.

* * * * *

Based on the foregoing and the shortage of power which will occur at low flow, the Board is of the opinion that if the Boulder Canyon Project is completed and put in operation, carrying as it does the costs of flood protection works and the All American Canal, it will be impossible to meet operation, maintenance, interest and a sufficient sinking fund to retire the cost of the project within a 50-year period.

4. It is obvious that the power which can be generated from Boulder Dam is a valuable resource. If the income from storage can be reasonably increased and the capital investment reduced by the cost of the All American Canal together with a reduction for or a part of the cost properly chargeable to flood protection, it would be possible to amortize the remaining cost with the income from power.

(Signed) COLORADO RIVER BOARD
MAJ. GEN. WILLIAM L. SIBERT,
Chairman.

CHARLES P. BERKEY.
DANIEL W. MEAD.
WARREN J. MEAD.
ROBERT RIDGWAY.

BOULDER CANYON PROJECT ACT

[Extracts from] An act to provide for the construction of works for the protection and development of the Colorado River Basin, for the approval of the Colorado River compact, and for other purposes. (Act of December 21, 1928, 45 Stat. 1057, 1063, 1065, 1066, Public Law 642, 70th Cong., 2d sess.)

* * * That for the purpose of controlling the floods, improving navigation and regulating the flow of the Colorado River, providing for storage and for the delivery of the stored waters thereof for reclamation of public lands and other beneficial uses exclusively within the United States, and for the generation of electrical energy as a means of making the project herein authorized a self-supporting and financially solvent undertaking, the Secretary of the Interior, subject to the terms of the Colorado River compact hereinafter mentioned, is hereby authorized to construct, operate, and maintain a dam and incidental works in the main stream of the Colorado River at Black Canyon or Boulder Canyon adequate to create a storage reservoir of a capacity of not less than twenty million acre-feet of water and a main canal and appurtenant structures located entirely within the United States connecting the Laguna Dam, or other suitable diversion dam, which the Secretary of the Interior is hereby authorized to construct if deemed necessary or advisable by him upon engineering or economic considerations, with the Imperial and Coachella Valleys in California, the expenditures for said main canal and appurtenant structures to be reimbursable, as provided in the reclamation law, and shall not be paid out of revenues derived from the sale or disposal of water power or electric energy at the dam authorized to be constructed at said Black Canyon or Boulder Canyon, or for water for potable purposes outside of the Imperial and Coachella Valleys: *Provided, however,* That no charge shall be made for water or for the use, storage, or delivery of water for irrigation or water for potable purposes in the Imperial or Coachella Valleys; also to construct and equip, operate, and maintain at or near said dam, or cause to be constructed, a complete plant and incidental structures suitable for the fullest economic development of electrical energy from the water discharged from said reservoir; and to acquire by proceedings in eminent domain, or otherwise, all lands, rights of way, and other property necessary for said purposes.

SEC. 2. (a) There is hereby established a special fund, to be known as the "Colorado River Dam fund" (hereinafter referred to as the "fund"), and to be available, as hereafter provided, only for carrying out the provisions of this Act. All revenues received in carrying out the provisions of this Act shall be paid into and expenditures shall be made out of the fund, under the direction of the Secretary of the Interior.

(b) The Secretary of the Treasury is authorized to advance to the fund, from time to time and within the appropriations therefor, such amounts as the Secretary of the Interior deems necessary for carrying out the provisions of this Act, except that the aggregate amount of such advances shall not exceed the sum of \$165,000,000. Of this amount the sum of \$25,000,000 shall be allocated to flood control and shall be repaid to the United States out of 62½ per centum of revenues, if any, in excess of the amount necessary to meet periodical payments during the period of amortization, as provided in Section 4 of this Act. If said sum of \$25,000,000 is not repaid in full during the period of amortization, then 62½ per centum of all net revenues shall be applied to payment of the remainder. Interest at the rate of 4 per centum per annum accruing during the year upon the amounts so advanced and remaining unpaid shall be paid annually out of the fund, except as herein otherwise provided.

(c) Moneys in the fund advanced under subdivision (b) shall be available only for expenditures for construction and the payment of interest, during construction, upon the amounts so advanced. No expenditures out of the fund shall be made for operation and maintenance except from appropriations therefor.

SEC. 3. There is hereby authorized to be appropriated from time to time, out of any money in the Treasury not otherwise appropriated, such sums of money as may be necessary to carry out the purposes of this Act, not exceeding in the aggregate \$165,000,000.

SEC. 4. (a) This Act shall not take effect and no authority shall be exercised hereunder and no work shall be begun and no moneys expended on or in connection with the works or structures provided for in this Act, and no water rights shall be claimed or initiated hereunder, and no steps shall be taken by the United States or by others to initiate or perfect any claims to the use of water pertinent to such works or structures unless and until (1) the States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming shall have ratified the Colorado River compact, mentioned in section 13 hereof, and the President by public proclamation shall have so declared, or (2) if said States fail to ratify the said compact within six months from the date of passage of this Act then, until six of said States, including the State of California, shall ratify said compact and shall consent to waive the provisions of the first paragraph of Article XI of said compact, which makes the same binding and obligatory only when approved by each of the seven States signatory thereto, and shall have approved said compact without conditions, save that of such six-State approval, and the President by public proclamation shall have so declared, and, further, until the State of California, by act of its legislature, shall agree irrevocably and unconditionally with the United States and for the benefit of the States of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming, as an express covenant and in consideration of the passage of this Act, that the aggregate annual consumptive use (diversions less returns to the river) of water of and from the Colorado River for

use in the State of California, including all uses under contracts made under the provisions of this Act and all water necessary for the supply of any rights which may now exist, shall not exceed four million four hundred thousand acre-feet of the waters apportioned to the lower basin States by paragraph (a) of Article III of the Colorado River compact, plus not more than one-half of any excess or surplus waters unapportioned by said compact, such uses always to be subject to the terms of said compact.

The States of Arizona, California, and Nevada are authorized to enter into an agreement which shall provide (1) that of the 7,500,000 acre-feet annually apportioned to the lower basin by paragraph (a) of Article III of the Colorado River compact, there shall be apportioned to the State of Nevada 300,000 acre-feet and to the State of Arizona 2,800,000 acre-feet for exclusive beneficial consumptive use in perpetuity, and (2) that the State of Arizona may annually use one-half of the excess of surplus waters unapportioned by the Colorado River compact, and (3) that the State of Arizona shall have the exclusive beneficial consumptive use of the Gila River and its tributaries within the boundaries of said State, and (4) that the waters of the Gila River and its tributaries, except return flow after the same enters the Colorado River, shall never be subject to any diminution whatever by any allowance of water which may be made by treaty or otherwise to the United States of Mexico but if, as provided in paragraph (c) of Article III of the Colorado River compact, it shall become necessary to supply water to the United States of Mexico from waters over and above the quantities which are surplus as defined by said compact, then the State of California shall and will mutually agree with the State of Arizona to supply, out of the main stream of the Colorado River, one-half of any deficiency which must be supplied to Mexico by the lower basin, and (5) that the State of California shall and will further mutually agree with the States of Arizona and Nevada that none of said three States shall withhold water and none shall require the delivery of water, which can not reasonably be applied to domestic and agricultural uses, and (6) that all of the provisions of said tri-State agreement shall be subject in all particulars to the provisions of the Colorado River compact, and (7) said agreement to take effect upon the ratification of the Colorado River compact by Arizona, California, and Nevada.

(b) * * * Before any money is appropriated for the construction of said main canal and appurtenant structures to connect the Laguna Dam with the Imperial and Coachella Valleys in California, or any construction work is done upon said canal or contracted for, the Secretary of the Interior shall make provision for revenues, by contract or otherwise, adequate in his judgment to insure payment of all expenses of construction, operation, and maintenance of said main canal and appurtenant structures in the manner provided in the reclamation law. * * *

SEC. 10. That nothing in this Act shall be construed as modifying in any manner the existing contract, dated October 23, 1918, between the United States and the Imperial Irrigation District, providing for a connection with the Laguna Dam; but the Secre-

tary of the Interior is authorized to enter into contract or contracts with the said district or other districts, persons, or agencies for the construction, in accordance with this Act, of said canal and appurtenant structures, and also for the operation and maintenance thereof, with the consent of the other users.

SEC. 11. That the Secretary of the Interior is hereby authorized to make such studies, surveys, investigations, and do such engineering as may be necessary to determine the lands in the State of Arizona that should be embraced within the boundaries of a reclamation project, heretofore commonly known and hereafter to be known as the Parker-Gila Valley reclamation project, and to recommend the most practicable and feasible method of irrigating lands within said project, or units thereof, and the cost of the same; and the appropriation of such sums of money as may be necessary for the aforesaid purposes from time to time is hereby authorized. The Secretary shall report to Congress as soon as practicable, and not later than December 10, 1931, his findings, conclusions, and recommendations regarding such project.

* * * * *

SEC. 13. (a) The Colorado River compact signed at Santa Fe, New Mexico, November 24, 1922, pursuant to Act of Congress approved August 19, 1921, entitled "An Act to permit a compact or agreement between the States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming respecting the disposition and apportionment of the waters of the Colorado River, and for other purposes," is hereby approved by the Congress of the United States, and the provisions of the first paragraph of article II of the said Colorado River compact, making said compact binding and obligatory when it shall have been approved by the legislature of each of the signatory States, are hereby waived, and this approval shall become effective when the State of California and at least five of the other States mentioned, shall have approved or may hereafter approve said compact as aforesaid and shall consent to such waiver, as herein provided. * * *

SEC. 14. This Act shall be deemed a supplement to the reclamation law, which said reclamation law shall govern the construction, operation, and management of the works herein authorized, except as otherwise herein provided.

SEC. 15. The Secretary of the Interior is authorized and directed to make investigation and public reports of the feasibility of projects for irrigation, generation of electric power, and other purposes in the States of Arizona, Nevada, Colorado, New Mexico, Utah and Wyoming for the purpose of making such information available to said States and to the Congress, and of formulating a comprehensive scheme of control and the improvement and utilization of the water of the Colorado River and its tributaries. The sum of \$250,000 is hereby authorized to be appropriated from said Colorado River Dam fund, created by Section 2 of this Act, for such purposes.

* * * * *

SEC. 20. Nothing in this Act shall be construed as a denial or recognition of any rights, if any, in Mexico to the use of the waters of the Colorado River system.

SEC. 21. That the short title of this Act shall be "Boulder Canyon Project Act."

NOTE.—The Boulder Canyon Adjustment Act of July 19, 1940 (54 Stat. 774), authorized the Secretary to promulgate and to put into effect charges for electrical energy generated at Boulder Dam, provided for the application of revenues from said project, authorized the operation of the Boulder Power Plant by the United States directly or through agents, and for other purposes.

CONSTITUTIONALITY OF BOULDER CANYON PROJECT ACT UPHELD

In *Arizona v. California et al.*, decided May 18, 1931, the Boulder Canyon project act authorizing the building of a dam by the United States across the Colorado River, an interstate and international stream, was held by the Supreme Court to be constitutional, the act reciting (sec. 1) that a purpose of the law was to improve navigation. The court took judicial notice that the river had been navigable south of Black Canyon. The statutes of Arizona (Arizona Laws, 1929, ch. 102, secs. 1-4) prohibited the erection of dams by the United States wholly or partly within the State, except after approval of plans by the Arizona State engineer. It was held that the United States may perform its functions without conforming to the police regulations of a State. The court stated that, since the act is found to be constitutional on other grounds, it is not necessary to decide whether the construction of the dam by the United States might have been supported under the power to irrigate public lands of the United States, to regulate and prevent floods on an interstate stream, to conserve and apportion the waters thereof among the States entitled thereto, or to fulfill international obligations. (*Arizona v. California et al.*, 283 U. S. 423, 51 Sup. Ct. 522, 75 L. Ed. 1154.)

NAMING OF HOOVER DAM

An act to restore name of Hoover Dam. (Act of April 30, 1947, Ch. 46, 61 Stat. 56, Public Law 43, 80th Cong.)

That the name of Hoover Dam is hereby restored to the dam on the Colorado River in Black Canyon constructed under the authority of the Boulder Canyon Project Act, approved December 21,

1928 (45 Stat. 1057), and referred to as Hoover Dam in the Act approved February 14, 1931 (46 Stat. 1146); in the Act approved April 22, 1932 (47 Stat. 118); in the Act approved July 1, 1932 (47 Stat. 535); in the Act approved July 21, 1932 (47 Stat. 717); and in the Act approved February 17, 1933 (47 Stat. 845). Any law, regulation, document, or record of the United States in which such dam is designated or referred to under the name of Boulder Dam shall be held to refer to such dam under and by the name of Hoover Dam.

FLOOD CONTROL WORKS—COACHELLA DIVISION

UNITED STATES DEPARTMENT OF THE INTERIOR,
Bureau of Reclamation,
Washington, July 21, 1947.

THE SECRETARY OF THE INTERIOR.

SIR: I submit herewith a report of the Bureau of Reclamation on the engineering feasibility, the total estimated cost, and the allocation and probable repayment of costs of the distribution system including the appurtenant flood control works for the Coachella Division, All-American Canal System, Boulder Canyon Project.

The report has been prepared pursuant to Section 7(b) of the Reclamation Project Act of 1939, which authorizes the Secretary of the Interior to make allocations of costs in accordance with provisions of Section 9 thereof in the case, among others, of supplemental works on a project under construction or for which appropriations had been made at the time of its passage, into which category these works fall.

The Coachella Valley Division is an authorized division of the All-American Canal System. Construction of the Coachella Main Canal, now well advanced, will bring Colorado River water to the Coachella Valley. A contract dated October 15, 1934, between the United States and the Coachella Valley County Water District provides for repayment of the cost of the main canal. Construction of the distribution system and completion of appurtenant flood protective works is needed to relieve current serious overdrafts on a rapidly diminishing underground water supply for presently irrigated lands and to protect the distribution system and valley lands from flood damage. When completed, the distribution system will make possible the service of a dependable irri-

gation water supply to more than 75,000 acres of fertile, productive lands.

The protective works are designed primarily to protect, and assure continuous irrigation to the agricultural lands of the Coachella Valley for the irrigation of which the Coachella Canal of the All-American Canal System has been constructed, and for which the Bureau of Reclamation is negotiating a contract with the Coachella Valley County Water District for the construction of the distribution system to serve these agricultural lands. Hence these works are appurtenant to the distribution system and I recommend that you so find. Such a finding would be compatible with the expression of policy contained in your letter of May 14, 1947, to the Hon. Richard J. Welch, Chairman, House Public Lands Committee, in reporting on H.R. 3348 which became law on June 26, 1947, as Public Law 121, 80th Congress. This finding is also supported by the reports of the House and Senate Public Lands Committees on H. R. 3348. The Senate Committee Report stated that the protective or flood control works are considered appurtenant to the distribution system since they are required and are designed primarily to protect, and assure continuous irrigation service to and protect the agricultural lands of the Coachella Valley and the cities and towns, railroads, highways, and other facilities that are or will be dependent on the irrigation system.

Pursuant to the requirements of Section 9 of the Reclamation Project Act of 1939, the following allocations of the estimated total cost of the distribution system works (\$18,000,000) of the project as at present authorized by law are made as explained in detail in the report.

Irrigation	\$13,500,000
Flood control	4,500,000
Total allocations	18,000,000

An analysis of repayment ability shows that the cost of distribution works allocated to irrigation can be repaid by the water users within the period provided by law, which repayment will be provided for in the contract now under negotiation. These returnable and repayable costs, together with the allocation to flood control which is nonreimbursable, equal the total estimated cost of the distribution system.

I therefore recommend that you approve and adopt the enclosed report¹ and the allocations, determinations, and findings made therein, and transmit the same to the President and to the Congress, pursuant to the Reclamation Project Act of 1939.

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

¹ Excluded from this publication.

JULY 21, 1947.

The enclosed report ² and all the allocations, determinations, and findings set forth therein are hereby approved and adopted.

(Signed) J. A. KRUG,
Secretary of the Interior.

THE SECRETARY OF THE INTERIOR,
Washington, July 22, 1947.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: Transmitted herewith is a copy of a letter to me from the Commissioner of Reclamation, together with a report, which I have approved and adopted, concerning the Coachella Valley Division of the All-American Canal System, Boulder Canyon Project.

The report deals with the estimated total construction or capital costs of the distribution system including the appurtenant flood protective works, and the allocation of those costs to irrigation and flood control pursuant to Sections 7(b) and 9 of the Reclamation Project Act of 1939.

The Coachella Valley Division is an authorized division of the All-American Canal System, Boulder Canyon Project, for which construction of the Coachella Main Canal is well advanced. Repayment of the cost of the main canal is provided for in a contract dated October 15, 1934, between the United States and the Coachella Valley County Water District. Construction of the distribution system and completion of its appurtenant flood protective works will relieve current serious overdrafts on the rapidly diminishing underground water supply, and will make possible the service of a dependable water supply to more than 75,000 acres of fertile, productive lands.

The total estimated cost of the distribution system and appurtenant protective works is found to be \$18,000,000. Exhaustive consideration has been given to the allocation of the total estimated costs of \$18,000,000 to irrigation and flood control, and the allocation that I have approved and adopted is as follows:

Irrigation	\$13,500,000
Flood control	4,500,000
Total	18,000,000

² Excluded from this publication.

The Reclamation Project Act of 1939 provides that allocations to the purposes of flood control shall be nonreturnable and non-reimbursable. Public Law 121 of the 80th Congress, approved by you on June 26, 1947, clarifies my authority for making such an allocation for the Coachella Division. As recommended by the Commissioner of Reclamation, I find that the flood protective works are appurtenant to the distribution system, and as such they are subject to the provisions of Sections 7(b) and 9 of the Reclamation Project Act of 1939.

The basic plan of the distribution system and appurtenant protective works, and the design and construction of the physical features comprising them, have been thoroughly investigated by engineers competent and experienced in such matters. Upon the basis of these investigations, I have found that these works have engineering feasibility.

Analysis of repayment ability shows that the project lands can return the costs allocated to irrigation within the repayment period provided by the reclamation laws.

Accordingly, I find that all the estimated reimbursable construction costs of the project which are allocated to irrigation probably can be repaid to the United States by the water users.

The allocation to flood control has been the subject of consultation with the Secretary of War and the Chief of Engineers. The Secretary of War states, as shown in the enclosed copy of his letter of July 18, 1947, that "the basic plan proposed by the Bureau of Reclamation appears to provide for adequate flood control improvements," and that the allocation of cost to flood control "appears to be in accordance with the intent of Public Law No. 121."

Section 9 of the Reclamation Project Act of 1939 authorizes the concurrent submission of this report to you and to the Congress. I have deemed it desirable to present the matter to you first. I expect, however, to present it, and a copy of this letter, to the Congress promptly, unless you have objections.

Sincerely yours,

(Signed) J. A. KRUG,
Secretary of the Interior.

THE SECRETARY OF THE INTERIOR,
Washington, July 24, 1947.

HON. ARTHUR H. VANDENBERG,
President pro tempore,
United States Senate.

MY DEAR SENATOR VANDENBERG: Pursuant to the Reclamation Project Act of 1939, there is transmitted herewith a report presented to the Secretary of the Interior by the Bureau of Reclamation of this Department on July 21, 1947, on the Coachella Valley

Division of the All-American Canal System, Boulder Canyon Project, California.

This report was approved by me on July 21, 1947, and was transmitted to President Truman on July 22, 1947. Copies of Commissioner of Reclamation Straus' letter of July 21, 1947, transmitting the report to me, and my letter of July 22 to President Truman are enclosed.

The Bureau of the Budget has advised, on instructions of the President, that there would be no objection to the submission of this report to the Congress.

Sincerely yours,

(Signed) J. A. KRUG,
Secretary of the Interior.

Identical letter sent to Speaker of the House of Representatives.

BUFFALO RAPIDS PROJECT

MONTANA

The first division of the Buffalo Rapids project (the Glendive unit and Extension constitute the first division) was found feasible by the Acting Secretary on June 16, 1937, under the provisions of section 4 of the Act of June 25, 1910 (36 Stat. 836), and subsection B of section 4 of the Act of December 5, 1924 (43 Stat. 702), and was approved by the President on September 27, 1937. On April 10, 1940, the Secretary recommended that the first division be completed and operated under the terms of the Act of May 10, 1939 (53 Stat. 685, 719). That recommendation which included the enlargement of the division by 3,000 acres was approved by the President on May 15, 1940.

Construction of the second division including Fallon, Shirley, and Terry Units, was recommended by the Acting Secretary on October 2, 1939, under the terms of the Act of May 10, 1939 (53 Stat. 685, 719), and approved by the President October 11, 1939. A revised plan was submitted by the Secretary on April 10, 1940 and approved by the President on May 15, 1940. In accordance with section 5 of the act of July 16, 1943 (57 Stat. 567), continuation of construction of the second division was found justified by the Secretary on November 5, 1943 as an aid in the production of needed agricultural products, and the finding was approved by the President on November 30, 1943.

The Act of October 10, 1949 (Public Law 336, 81st Congress) authorized the Secretary to complete construction of irrigation facilities including drainage works on the first and second divisions.

The third division was authorized as part of the Missouri River Basin Project under the provisions of the Flood Control Acts of 1944 and 1946, but was renamed Sadie Flat, Marsh, and Haley units of the Yellowstone division, Missouri River Basin project.

FIRST DIVISION

OFFICE OF THE SECRETARY,
Washington, June 16, 1937.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The following report on the Glendive unit of the Buffalo Rapids Reclamation project in the State of Montana is made to you under the provisions of Section 4 of the act of June 25, 1910, (36 Stat. 835).

This section of the Act provides in effect that after the date of said Act, no irrigation project to be constructed under the act of June 17, 1902, (32 Stat. 388) and Acts amendatory thereof or supplementary thereto, shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by direct order of the President.

Subsection B, Section 4, Act of December 5, 1924, (43 Stat. 701) provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

The Buffalo Rapids project contemplates the irrigation of several tracts of land in Montana on both sides of the Yellowstone River above the Lower Yellowstone project of the Bureau of Reclamation. The Glendive unit is the farthest down stream of these tracts, and is the one now proposed for construction. The plan of irrigation for the Glendive unit is to pump water from the Yellowstone River to a canal and lateral system which will convey the water to 17,000 acres of irrigable land in a strip of 2 miles average width along the northwest bank of the Yellowstone, extending from Glendive, Montana, up the river about 28 miles.

WATER SUPPLY

After a study of the local precipitation records and the requirements for irrigation on the nearby Lower Yellowstone project, it

is estimated that the required annual pumpage for the Buffalo Rapids project will be 3 acre feet per acre on the average with a maximum of 4 acre feet per acre in the driest years. A study of runoff records of the Yellowstone River indicates that the remaining surplus after by-passing the full demand for the Lower Yellowstone project, the lowest project on the river, will be sufficient for the entire Buffalo Rapids project, and more than ample for the Glendive unit.

ENGINEERING FEATURES AND CONSTRUCTION COSTS

The principal construction features for the Glendive unit are as follows:

(1) An electrically operated pumping plant situated on the northwest bank of the Yellowstone River, $2\frac{1}{2}$ miles northeast of Fallon, Montana. The plant will be equipped with 2 units of 125 second feet each. Power will be supplied initially, at least, by the Montana-Dakota Power Company, at a rate of 4 mills per kilowatt hour.

(2) A discharge line of 68-inch diameter steel pipe to convey the water from the pumping plant through a lift of 132 feet and for a length of 3,100 feet to the main canal.

(3) A main canal of 500 second feet initial capacity 32 miles in length extending to Upper Seven-Mile Creek, west of Glendive. The canal is to be constructed with excess capacity so that additional lands downstream from Glendive may be irrigated by the addition of pumping units and a second discharge line when it is found desirable to increase the irrigated area of the Glendive unit. Practically all excavation for the canal will be in earth and little or no lining will be required. Canal structures consist essentially of small wash-crossings.

(4) Laterals of short length and small capacity, and

(5) A drainage system which will need to be started shortly after water is delivered and the construction of which may be extended over a period of years until all of the unit is under irrigation.

The estimated costs of construction are as follows:

Pumping plant of 250 second feet capacity.....	\$275,000
Discharge line	125,000
Main canal	376,000
Laterals	204,000
Priming and puddling canals, commencing operations.....	100,000
Engineering, overhead, contingencies, and miscellaneous.....	270,000
Drainage	255,000
Total	1,605,000

This total also may be divided into an estimated amount of \$626,000 for materials, equipment and freight; \$829,000 for local labor; and \$150,000 for superintendence, and technical and clerical aid.

LAND PRICES

The total 17,000 acres of land are privately owned. The rights of way which must be secured are not included in the estimates of costs given above. It is believed desirable that the repayment con-

tract with the irrigation district shall contain a stipulation that as a condition precedent to construction, the required rights of way will be furnished without cost to the United States. The contract also should provide for appraisal of lands on the basis of value without irrigation, and for the sale of holdings in excess of the area (not exceeding 160 acres) required for the support of a family, to new settlers at or below the appraised value.

ADAPTABILITY OF LAND TO SETTLEMENT AND FARM HOMES

The land comprised in the 17,000 acres of irrigation lands is of good fertility. Rough land and poor soils have been eliminated. The land can readily be prepared for the effective application of water. If properly prepared for irrigation and properly cultivated, good yields of all crops grown in this locality are assured. With care in the selection of new settlers and farms suitably improved and equipped, success in farming may be anticipated.

PROBABLE RETURN TO RECLAMATION FUND OF COST OF CONSTRUCTION

A finding is required that the cost of construction will probably be returned to the Reclamation Fund. This is interpreted to mean that it will be returned within a maximum period fixed by Reclamation Law which is 40 years from the time public notice that the works are completed is issued by the Secretary. Due to the emergency existing in this region, it is proposed in lieu of the usual procedure of constructing the project by contract, with expenditures wholly reimbursable, that this project will, to a large degree, be constructed by force account with non-reimbursable funds, these funds being provided as a Federal grant for relief purposes.

It is estimated that the cost of pumping and of operations and maintenance of project will be approximately \$3 per acre per annum, assuming a power charge of 4 miles per kilowatt hour. From the experience of the Bureau of Reclamation on projects where weather, crop, and market conditions are similar, it is believed that a charge greatly in excess of \$4 per acre per annum will be burdensome to the landowners. The construction charge repayment, therefore, should be held at a figure not greatly in excess of \$1 per acre per annum.

It is proposed that the amount spent for local labor, estimated at \$829,000 be non-reimbursable and that the remaining \$776,000 be reimbursable under Reclamation Law, based on a 40 year repayment program. The annual construction repayment charge would be \$1.14 per acre or a total of \$4.14 per acre per annum for pumping, operation and maintenance, and repayment. These lands should be capable of making this payment.

FINDING REGARDING FEASIBILITY OF PROJECT

The foregoing data justify the conclusion that the project is

feasible from an engineering standpoint and is economically feasible on the basis of repayment of \$776,000 as set out in the preceding paragraph. I accordingly so find and declare.

The section of Montana of which the project is a part lies in the semi-arid region which has suffered from a persistent drought over a number of years with an exceptional impairment of agricultural activities and attendant reduction in the number of livestock. The region is faced with general abandonment of farms and homes unless agriculture is bolstered by irrigation. Because of the urgent need of providing a water supply for these lands, I recommend that construction of the Glendive unit of the Buffalo Rapids Project be approved, that an adequate allotment of relief funds be provided, and that construction be started at an early date.

Sincerely yours,

(Signed) CHARLES WEST,
Acting Secretary of the Interior.

Approved September 27, 1937.

(Signed) FRANKLIN D. ROOSEVELT,
President.

OFFICE OF THE SECRETARY,
Washington, April 10, 1940.

THE PRESIDENT,
The White House.
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: The Interior Department Appropriation Act of 1940 contains the following item, hereinafter called the "1940 Water Conservation Authority":

For construction, in addition to labor and materials to be supplied by the Works Progress Administration, of water conservation and utilization projects, * * * in the Great Plains and arid and semiarid areas of the United States, * * * \$5,000,000 to be allocated by the President, * * * and to be reimbursed to the United States by the water users * * * : *Provided*, That expenditures from Works Progress Administration funds shall be subject to such provisions with respect to reimbursability as the President may determine.

There is presented herein, for your approval, a proposal to complete and to bring the operation of the First Division (formerly termed the Glendive Unit) of the Buffalo Rapids Irrigation Project in Montana under the provisions of the 1940 Water Conservation Authority. This Division is now under construction with funds allocated from the Emergency Relief Appropriation Act of 1937.

The First Division is a project of the type contemplated for construction under the 1940 Water Conservation Authority. The lands of the Division, comprising 15,500 acres, are located in Dawson County on the north bank of the Yellowstone River. They extend 25 miles upstream from Glendive, nearly to Fallon, in a strip from one to two miles wide, and are situated immediately across the river from the lands of the Second Division, for which an allocation has been made from the appropriation mentioned above.

Water for irrigating the land will be obtained from the Yellowstone River, pumped to a height of 100 feet above the river, and then conveyed to the farms through 32 miles of canals and a system of laterals and farm ditches. Electrical energy for pumping will be obtained at first from the Montana—Dakota Power Company and later perhaps from the plant to be installed at Fort Peck Dam.

The lands are of good fertility and are well adapted to irrigation. The principal crops will be forage and small grains to supplement the livestock industry. U. S. Highway No. 10 traverses the entire length of the project and the main line of the Northern Pacific and of the Chicago, Milwaukee and St. Paul Railroads pass through the nearby towns of Glendive and Fallon, thus providing access to markets.

Construction of the Division was started by the Bureau of Reclamation in 1937 with funds allocated from the Emergency Relief Appropriation Act of that year, and that work is now approximately 80% completed. An area of 3,000 acres in the so-called "Upper Glendive-Fallon" district had been omitted from the project due to an unpaid bond issue outstanding against it. The Farm Security Administration has recently indicated that it can obtain control of these lands, and the revised estimate for construction includes a lateral system for this district.

It is desirable to bring the Division under the provisions of the Great Plains program for the following reasons:

1. Construction has been conducted in large measure with relief forces rather than by the contract methods ordinarily employed by the Bureau of Reclamation;

2. Only a portion of the funds used in construction are reimbursable, instead of being entirely reimbursable as are the funds for other Reclamation projects; and

3. The Second Division of the project, separated from the First Division only by the Yellowstone River, is to be constructed and developed under the Great Plains program and, if the two divisions are operated by separate agencies, considerable duplication of effort will result and much confusion and many difficulties will arise through the enforcement of different repayment measures and rates.

4. Construction of the First Division can be completed with forces now available, and during the time the preliminary work for the Second Division is under way.

The cost of materials and supplies has increased considerably since the original estimates were prepared. An additional sum of \$230,000 is needed to complete construction, to build a lateral

system for the additional 3,000 acres, to provide drainage facilities needed in the first few years, and to furnish some funds for operation and maintenance during construction. The drainage cost is difficult to determine and the above estimate may have to be increased some time in the future as the project reaches its full development. The additional amount should not exceed \$100,000. The participation of the Department of Agriculture will require expenditures estimated at \$330,000 for rough leveling, construction of farm ditches, settlement, and related features.

It will be difficult for the landowners to pay construction charges greatly in excess of those contemplated for the Second Division, particularly since the pumping lift for the First Division exceeds that of the other Division, thus increasing pumping costs. It is believed equitable to charge the water users approximately the same rate per acre on both divisions. This will require some reduction in the reimbursable portion of the Emergency Relief Appropriation funds heretofore allocated.

Analyses of these factors are shown on two tabulations which are attached. It will be noted from Table No. 1 that \$560,000 is needed at this time, of which \$330,000 is considered reimbursable and is expected to be obtained from the 1940 Water Conservation Authority, while \$230,000 is non-reimbursable and is planned to be furnished by the Work Projects Administration. Table No. 2 explains the reduction in the reimbursable portion of the present allotment to maintain the same construction charge per acre for the two divisions. The estimated charge per acre for the Second Division, which forms the basis for some of the calculations in this table, is taken from the previous presentation to you of the Second Division, which you approved on October 11, 1939. If it is possible to make a saving in the cost of constructing the Second Division, the calculations in the table would consequently be changed. For this reason, the figures in the tabulation should not be considered final, and the determination of the charges to be levied against the First Division should await the completion of construction of both divisions.

The experience of the Bureau of Reclamation on projects which are similarly situated indicates that the water users will probably be able to repay construction charges of \$620,000 over a period of forty years, and the Department of Agriculture has stated that the development charges of \$210,000 can readily be repaid in the same period. These charges, amounting to \$830,000, are in addition to those required for maintenance and operation, including the costs of electrical energy.

I recommend that the First Division of the Buffalo Rapids Project be completed and operated under the provisions of the 1940 Water Conservation Authority; that the Bureau of Reclamation continue to act as the construction agency; that the bureaus of the Department of Agriculture conduct the land development program and the arrangement for settlement, repayment, and project operation; and that the National Resources Planning Board provide assistance in the planning and coordinating fields.

I recommend that an allocation of \$330,000 from the 1940

Water Conservation Authority be made to the Department of the Interior, Bureau of Reclamation, and that the Work Projects Administration be requested to give prompt consideration to the project application which will be filed by the Bureau of Reclamation to secure the remaining \$230,000 needed for the Division.

The Department of Agriculture and the National Resources Planning Board will be reimbursed for all services connected with the construction of the Division by transfers or advances from the funds made available to the Department of the Interior, Bureau of Reclamation, for construction of the Division. Letters containing the comments of the Department of Agriculture and of the Work Projects Administration are enclosed.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved May 15, 1940.

(Signed) FRANKLIN D. ROOSEVELT,
President.

SECOND DIVISION

OFFICE OF THE SECRETARY,
Washington, October 2, 1939.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The Interior Department Appropriation Act, 1940, contains an item of \$5,000,000 from which allocations may be made by you:

For construction, in addition to labor and materials to be supplied by the Works Progress Administration, of Water Conservation and Utilization projects, * * * in the Great Plains and arid and semi-arid areas of the United States, * * *

All expenditures from this appropriation are to be reimbursable and expenditures from Work Projects Administration funds are to be subject to such provisions with respect to reimbursability as the President may determine. Hereinafter the item in the appropriation bill will be referred to as the "1940 Water Conservation Appropriation."

The Bureau of Reclamation is completing construction of the First Division, commonly termed the Glendive Unit, of the Buffalo Rapids project in Montana. The lands of this division are located

on the north side of the Yellowstone River, southwest of the city of Glendive. Construction of works for the additional tracts of land on the project may be undertaken economically and efficiently at this time while a qualified Federal organization is available. Furthermore, construction of this type of project comes within the intent of the appropriation item mentioned in the first paragraph and is in accord with the recommendations of the Northern Great Plains Committee. I recommend, therefore, that the Second Division of the Buffalo Rapids project be built in accordance with the provisions of the 1940 Water Conservation appropriation item.

The lands of the division lie in three tracts near the towns of Shirley, Terry, and Fallon, on the south side of the Yellowstone River in Custer, Prairie, and Dawson Counties, Montana. The area to be irrigated contains 9,800 acres, of which 5,300 are near Shirley, 1,000 acres near Terry, and 3,500 acres near Fallon. Water for irrigation will be obtained from the Yellowstone River, raised by electrically driven pumps an average height of 70 feet to the project canals and conveyed from them to the farm lands by canals and farm laterals. Power for pumping is to be obtained from the plant to be installed at Fort Peck Dam and delivered over transmission lines, the greater number of which are already built. Land development, including the construction of farm laterals and rough land leveling, will be undertaken as a part of the project construction.

The estimated cost of constructing the division is \$1,450,000. The experience of the Bureau of Reclamation on projects which are similarly situated indicates that the water users will be able to repay \$600,000 of this amount over a period of forty years, in addition to carrying the annual costs of operation and maintenance. Of this amount, \$550,000 should be obtained from the 1940 Water Conservation Appropriation. The remaining amount of \$900,000 required to construct the division is expected to be provided by the Work Projects Administration. A tabulation is attached¹ in which is shown a tentative break-down of expenditures from the two funds. The estimate of expenditures from Work Projects Administration funds is based on the experience of the Bureau of Reclamation on construction with relief forces under the legislative provisions in effect prior to the fiscal year 1940. The efficiency with which the work can be constructed under the new Work Projects Administration is unknown. Therefore, the estimate of Work Projects Administration funds required may need revision at some later date. The time required for the construction of the project will depend upon the available relief labor and may extend to two or three years.

Forage and small grains, for the support of the livestock industry, will be the principal crops. Accessibility to markets is provided by highly improved highways and the main lines of the Northern Pacific and of the Chicago, Milwaukee, St. Paul and Pacific Railroads which pass through the entire length of the division. It is believed the water users will be able to meet the

¹ Excluded from this publication.

annual costs for operation and maintenance and, in addition, to pay an amount per acre annually towards construction, which will effect repayment of expenditures from the 1940 Water Conservation Appropriation. An irrigation district or some other form of organization will be formed to contract for the collection of construction charges and the operation of the division upon completion.

Settlement will be guided and education will be given in irrigation procedure. The control of lands in excess of those required by the present residents will be obtained by special option agreement, insofar as possible, or by similar plan, in order to settle at least a part of the unit with destitute drouth-stricken farmers. A development period of several years may be necessary before the division can assume the repayment burden.

I recommend that the construction of the Second Division be conducted by the Bureau of Reclamation; that the supervision of land development and the arrangements for settlement, repayment, and project operations be made by the bureaus of the Department of Agriculture and that the National Resources Planning Board act in a planning and coordinating capacity to assist in bringing construction to a successful conclusion.

I recommend that an allocation of \$550,000 from the 1940 Water Conservation appropriation be made to the Department of the Interior, Bureau of Reclamation, to assist in the construction of the division; that the Work Projects Administration be requested to give earnest consideration to the project applications which will be filed by the Bureau of Reclamation to obtain the remaining \$900,000 needed for the construction of the Second Division of the Buffalo Rapids project.

The Bureau of Reclamation will reimburse the Department of Agriculture and the National Resources Planning Board for all necessary services provided by these two agencies in connection with the construction of the division, either by transfers or advances of funds made available to the Bureau of Reclamation. Letters containing comments of the Department of Agriculture and the Work Projects Administration are enclosed.

Sincerely yours,

(Signed) E. K. BURLEW,
Acting Secretary of the Interior.

Approved October 11, 1939.

(Signed) FRANKLIN D. ROOSEVELT,
President.

OFFICE OF THE SECRETARY,
Washington, April 10, 1940.

THE PRESIDENT,
THE WHITE HOUSE.

(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: The Interior Department Appropriation Act, 1940, contains an appropriation of \$5,000,000 from which allocations may be made by you:

For construction, in addition to labor and materials to be supplied by the Works Progress Administration, of Water Conservation and Utilization projects, * * * in the Great Plains and arid and semi-arid areas of the United States, * * *

All expenditures from the appropriation, and as much of the expenditures from the Work Projects Administration fund as the President determines, are to be considered reimbursable. Hereinafter the appropriation item will be termed the "1940 Water Conservation Appropriation."

You approved the inclusion of the Second Division of the Buffalo Rapids Project in the Great Plains program and its construction under the provisions of the appropriation item mentioned above on October 11, 1939. Since that time the engineers of the Bureau of Reclamation have completed detailed surveys of the division which indicate that certain of the engineering features should be revised and that an additional 1,800 acres should be added to the project area, thus increasing the area from 9,800 acres to 11,600 acres. These revisions have increased the estimated cost of the project from \$1,450,000 to \$1,840,000. It is, therefore, considered necessary to resubmit the project proposal to you.

A general description of the location of the lands, the type of crops to be raised, and the transportation facilities available were contained in the previous submission and will not be restated. As now constituted, the lands of the division lie in three tracts near the towns of Shirley, Terry, and Fallon on the south side of the Yellowstone River in Custer, Prairie, and Dawson Counties, Montana. The area to be irrigated contains 11,600 acres of which 5,300 acres are near Shirley, 2,800 acres near Terry, and 3,500 acres near Fallon. Water for irrigation will be obtained from the Yellowstone River, raised by electrically driven pumps to the project canals, and thence conveyed to the farm lands by the canal and lateral distribution system. Power for pumping is planned to be obtained from the plant to be installed at Fort Peck Dam and will be delivered over transmission lines, the greater number of which are already built. Construction will include the digging of farm ditches and necessary rough land leveling.

A study is being made of the most desirable size of farm units,

and the large holdings will be subdivided to adequate sized units before they are permitted to receive water. Also, water will be delivered to tenant operated lands only if conditions are such as to insure the best use of the land and interests of the tenant. The control of lands in excess of those required by the present residents will be obtained either through a contract with an irrigation district providing for the sale of excess holdings, or through the purchase of the large holdings with funds obtained from sources other than the water conservation appropriation. A development period of several years may be necessary before the project can assume the repayment burden.

The estimated cost of construction, including the building of all irrigation structures, and the leveling of the rough lands is \$1,840,000. Of this amount, \$740,000 is considered reimbursable and will be expended primarily for administration, supervision, materials, supplies, and the acquisition of rights of way. This latter amount should be obtained from the 1940 Water Conservation Appropriation. The balance, or \$1,100,000, is not expected to be repaid and is the estimated expenditure for labor, materials, and incidental costs from funds to be obtained from the Work Projects Administration. A tabulation is attached² in which is shown a tentative breakdown of expenditures from the two funds.

The time required for the construction of the project will depend upon the available relief labor and may extend to two or three years. The estimate of expenditures of Work Projects Administration funds is based on the experience of the Bureau of Reclamation on construction with relief forces under the legislative provisions in effect prior to fiscal year 1940. The efficiency with which the work can be constructed under other regulations is unknown. Therefore, the estimate of the funds required from the Work Projects Administration may need revision at some later date.

I recommend that the Bureau of Reclamation undertake the construction of the Second Division; that the Department of Agriculture conduct the land development program and the arrangements for settlement, land use repayment, and project operations; and that the National Resources Planning Board assist in the planning and coordinating field.

I recommend that an additional allotment of \$190,000 from the 1940 Water Conservation appropriation be made to the Department of the Interior, Bureau of Reclamation. This amount added to the allotment of \$550,000, which you approved on October 11, 1939, would make a total allocation of \$740,000 from the 1940 Water Conservation appropriation for the Second Division.

I also recommend that the Work Projects Administration be requested to give earnest consideration to the project application, which will be filed by the Bureau of Reclamation to obtain the remaining \$1,100,000 which will be needed for construction of the Second Division.

The Bureau of Reclamation will reimburse the Department of

² Excluded from this publication.

Agriculture for all services provided in connection with the construction of the project, through transfers or advances from the funds made available to the Bureau of Reclamation. Letters containing the comments of the Department of Agriculture and the Work Projects Administration are enclosed.

It is contemplated that actual construction will not be undertaken until the Department of Agriculture has made sufficient progress either in its efforts to obtain control of the large holdings at prices which do not exceed appraised valuations, or in its negotiations with the water users for the reduction of large holdings, which will insure the successful operation of the project.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved May 15, 1940.

(Signed) FRANKLIN D. ROOSEVELT,
President.

OFFICE OF THE SECRETARY,
Washington, May 6, 1941.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: On October 11, 1939, you approved an allotment of funds from the \$5,000,000 appropriation for "Water Conservation and Utility Projects," contained in the Interior Department Appropriation Act of 1940, for construction of the Second Division of the Buffalo Rapids irrigation project in Montana.

The Second Division contains 11,600 acres of land along the Yellowstone River, near the towns of Shirley, Terry, and Fallon. These are to be irrigated through the construction of pumping plants, canals, laterals, and drains by the Bureau of Reclamation of the Department of the Interior, and are to be developed and settled by the Farm Security Administration of the Department of Agriculture. The acquisition of agricultural lands is considered to be an important part of the development plans for, as stated in the report to you of the Northern Great Plains Committee dated October 1938, "unless a substantial portion of the lands to be benefited by a project are under Federal ownership or control . . . the benefits which would accrue from the program to destitute farm families in need of a permanent source of livelihood through relocation would be lost in large measure."

On other projects being developed under the provisions of the act mentioned in the first paragraph of this letter, the Depart-

ment of Agriculture has had funds available from other sources for the acquisition of the lands. However, the funds available for use in the State of Montana are insufficient to purchase the lands on the Second Division. The Secretary of Agriculture has therefore requested that an allotment of \$120,000 be made to him from the appropriation for "Water Conservation and Utility Projects" to be used for the acquisition of agricultural lands within the division's boundaries. In his letter requesting the allocation, the Secretary of Agriculture has called attention to the fact that, while a question was raised at one time as to the legal availability of funds derived from the \$5,000,000 appropriation for the purchase of lands for settlement purposes, the Solicitor of the Department of Agriculture has held that funds duly allocated from such appropriation may be used for such purposes. I recommend, therefore, that you approve of this allocation.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE.

Approved June 6, 1941.

(Signed) FRANKLIN D. ROOSEVELT,
President.

THE SECRETARY OF THE INTERIOR,
Washington, November 5, 1943.

THE PRESIDENT,

The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: There is presented herein for your approval a proposal to complete and to bring into operation the Second Division of the Buffalo Rapids irrigation project in Prairie County, Montana, under the provisions of Section 4 (d) of the Act of October 14, 1940 (54 Stat. 1119), as amended by the Act of July 16, 1943 (Public Law 152—78th Congress). The construction of this project which involves the development of a water supply for 11,600 acres of new land was approved by you on May 15, 1940, under the terms of the Interior Department Appropriation Act of 1940.

STATUS OF CONSTRUCTION

The project as approved originally would consist of three units—the Shirley unit, the Terry unit, and the Fallon unit. With the

exception of a small amount of backfilling around structures, some minor bridge construction, and the installation of a third pump, the Shirley unit is ready for crop production. While it would be desirable to install the pump soon, it could be deferred until some future date, if necessary. The canal system on the Terry unit has been completed, and the pumping plant is now being erected. Construction of this unit is being accomplished with Civilian Public Service labor, and is expected to be ready for crop production during the irrigation season of 1944. A preference rating for the Shirley and Terry units expired on September 30, but was extended by the War Production Board on October 7 to June 30, 1944.

Major construction features of the Fallon unit would be a main pumping plant on the Yellowstone River, a relift pumping plant, a system of canals and laterals, and a short transmission line. Excavation for the pumping plant was about 10 percent complete when the War Production Board issued a stop-construction order in December 1942. Considerable amounts of materials were delivered for this unit before the stop-construction order was issued, and are now on the site ready to be incorporated into the various structures. Critical materials yet required amount to 202 tons of steel, wire rope, nails, bolts, repair parts for construction equipment, and similar items. An application for a preference rating for the Fallon unit has been submitted to the War Production Board. If a favorable priority is assigned within a reasonable time, it is believed that the unit will be ready for irrigation in the spring of 1945.

ESTIMATED COST OF FINANCING PROCEDURE

When you approved this project for construction on May 15, 1940, it was estimated that the total cost of constructing the three units of the Buffalo Rapids project would be \$1,390,000, of which the Work Projects Administration would furnish \$875,000 in the form of labor and some materials. The balance of the cost, \$515,000, was expected to be repaid by the prospective irrigators, this amount being regarded as within their ability to repay over the statutory repayment period. Because of increased construction costs brought about by the war, it appears that the total cost of the completed project would be about \$1,628,000. Of the total cost, \$515,000 has been allotted from the appropriation for Water Conservation and Utility projects. The Work Projects Administration furnished labor and materials to the value of approximately \$329,000 out of their original estimated contribution of \$875,000, and the Civilian Conservation Corps furnished approximately \$18,000. The Selective Service System has contributed about \$40,000, and it is expected that this agency will contribute an additional \$40,000, exclusive of War Department costs, through the Civilian Public Service Camp which has been established. The present financial arrangements proposed for the completion of the Second Division are as follows:

Total estimated cost.....	\$1,628,000
Allotted	\$515,000
Available for allotment	
Contributed by Work Projects Administration.....	329,000
Contributed by Civilian Conservation Corps.....	18,000
Contributed by Civilian Public Service Camp.....	40,000
Anticipated Civilian Public Service participation.....	40,000
	<hr/> 942,000
Estimated balance required in lieu of anticipated contributions..	686,000
Overallotment for equipment which would be credited upon completion of the project	20,000
	<hr/>
Estimate of funds required	706,000

If you approve the continuation of construction of the Second Division, it is proposed to allot \$706,000 from the appropriation for Water Conservation and Utility projects, in lieu of the contributions of the Work Projects Administration and the Civilian Conservation Corps, and to continue construction in accordance with Section 4 (d) of the Act of October 14, 1940, as amended. Sufficient funds for this purpose have been appropriated and are now available for allotment.

CONSULTATION WITH THE WAR FOOD ADMINISTRATOR

On March 2, 1943, I transmitted to the Secretary of Agriculture, for his consideration, an optimum 5-year program covering the production of certain critical war foods in which the Bureaus of the Department of the Interior have special administrative responsibilities. The Fallon unit of the Buffalo Rapids project was among the irrigation projects recommended for consideration. Additional information was transmitted on July 2. This material is now under consideration by the War Food Administrator, who is expected to transmit his recommendations to the Chairman of the War Production Board at an early date.

FINDINGS AND RECOMMENDATIONS

Reimbursable costs were heretofore fixed at \$515,000 in the finding which you approved on May 15, 1940. The War Food Administrator, acting in the stead of the Secretary of Agriculture, and I, will agree upon expenditures to be excluded from the project costs. I am of the opinion that the amount of \$515,000 should continue to be the measure of the water users' ability to repay construction expenditures. Within the limits of the authority of the Act of July 16, 1943, I shall make adjustments of the project's construction cost to the extent necessary to keep the reimbursable costs in conformity with that finding.

I have consulted with the War Food Administrator, acting in the stead of the Secretary of Agriculture, concerning the justification of this project. Based on these consultations and on the information available to me concerning the project, I am of the opinion that the proposed construction would be justifiable as an aid in the production of needed agricultural products.

I recommend that you approve this report and finding, and that you authorize the expenditure of funds under the above act, to continue construction on the Shirley and Terry units, and to resume construction on the Fallon unit as soon as the War Production Board grants a favorable priority rating.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE.

November 30, 1943.

Approved in accordance with my letter of November 30, 1943:

(Signed) FRANKLIN D. ROOSEVELT,
President.

THE WHITE HOUSE,
Washington, November 30, 1943.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: On November 5, 1943, you submitted for approval your proposal for the continuation of construction of the Second Division of the Buffalo Rapids irrigation project in Montana, under the terms of the Act of August 11, 1939, as amended.

This project is approved with the stipulation that no commitments to the construction of the Fallon unit will be made until adequate priority ratings for the materials required for that unit are issued by the War Production Board.

Sincerely yours,

(Signed) FRANKLIN D. ROOSEVELT,
President.

COMPLETION OF BUFFALO RAPIDS PROJECT

An act to authorize the Secretary of the Interior to complete construction of the irrigation facilities and to contract with the water users on the Buffalo Rapids project, Montana, increasing the reimbursable construction cost obligation, and for other purposes. (Act of October 10, 1949, 63 Stat. 725, Public Law 336, 81st Cong., 1st sess.)

* * * That the Secretary of the Interior is authorized to complete the construction of irrigation facilities including necessary drainage works on the first and second divisions of the Buffalo Rapids project, Montana, as approved by the President under authority of the Act of May 10, 1939 (53 Stat. 685), and the Act

of October 14, 1940 (54 Stat. 1119), as amended: *Provided*, That of the funds heretofore or hereafter expended for such construction an amount equal to \$60 per irrigable acre as determined and announced by the Secretary of the Interior upon completion of the project, shall be reimbursable by the water users over a repayment period of not to exceed sixty years, and provision for the recovery thereof and for payment of the operation and maintenance costs of the irrigation and drainage features of the project shall be made by a contract or contracts satisfactory to the Secretary of the Interior.

SEC. 2. To carry out the purposes of this Act, the Secretary of the Interior is hereby authorized to allot any moneys available from appropriations heretofore made to the Department of the Interior for "water conservation and utility projects" and "water conservation and utilization projects", and there is hereby authorized to be appropriated to the Department of the Interior, out of any money in the Treasury not otherwise appropriated, such sums of money as may be necessary to complete the project.

BUFORD-TRENTON PROJECT

NORTH DAKOTA

The Buford-Trenton project was found feasible by the Secretary under the Reclamation Act of 1902 (32 Stat. 388) on November 18, 1904, examined and reported upon by a Board of Army Engineers pursuant to section 1 of the act of June 25, 1910 (36 Stat. 835), and approved by the President on January 5, 1911. (It was considered one of two units of the Missouri River pumping projects, later called the North Dakota Pumping project; the other unit was the Williston project.) The project was unsuccessful, however, and the Act of May 26, 1926 (44 Stat. 653) authorized the cancellation of all water-right charges and the release of all liens existing against the lands in the Buford-Trenton project on account of the water-right charges.

On August 23, 1939, under the terms of the Act of May 10, 1939 (53 Stat. 685, 719), the Secretary recommended construction of a project in the same general area. The plan was approved by the President on September 23, 1939. On July 22, 1942, a new finding enlarging the project area was made by the Secretary and approved by the President on August 7, 1942.

Funds were provided, without a finding of feasibility, for emergency flood protective work and minor completion work by the Interior Department Appropriation Act, 1954 (Act of July 31, 1953, 67 Stat. 261, 266, Public Law 172 83d Cong. 1st sess.)

The Nesson project was authorized by the Secretary under the Reclamation Act of 1902 on January 23, 1906, but was later reclassified as a secondary project. No construction was undertaken under this authorization. A project in the same general area was authorized as a unit of the Missouri River Basin project under the provisions of the Flood Control Acts of 1944 and 1946.

The Bismarck project was also authorized by the Secretary under the Reclamation Act of 1902 (32 Stat. 388) on November 18, 1904, but it was later reclassified as a secondary project. Under terms of the act of May 10, 1939 (53 Stat. 685, 719), a project in the same general area was recommended by the Secretary on April 5, 1940, and approved by the President April 26, 1940. That project was reauthorized as a unit of the Missouri River Basin Project under the provisions of the Flood Control Acts of 1944 and 1946.

ORIGINAL BUFORD-TRENTON AND BISMARCK PROJECTS

UNITED STATES GEOLOGICAL SURVEY,
November 14, 1904.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: During the summers of 1903 and 1904 reconnaissance investigations and surveys have been in progress to determine the feasibility of irrigating the lands along the Missouri River in North Dakota by the use of the waters of that river. The fall of the river is so slight that it is not practicable to divert it upon the irrigable lands which lie at a considerable elevation above the low water plane. The only feasible method of irrigating these lands and utilizing the abundant water supply of the Missouri River in this region is by pumping.

Extensive beds of lignite appear throughout this region and it is proposed to utilize this for the production of power for pumping the waters of the Missouri River above the adjacent lands.

The work has now reached a point where the preliminary investigations are completed and the experts engaged upon the plans and estimates have reported two feasible projects. One is known as the Buford-Trenton tract, situated on the left bank of the Missouri River close to the western boundary of the State where 18,000 acres of irrigable land can be reached at elevations above the low water plane of the Missouri River varying from 25 to 85 feet. It is proposed to irrigate this by means of two pumping plants, the first cost of which is estimated at \$300,000 and the annual maintenance and operation charges at \$36,000.

Under the provisions of the Reclamation Act it will be necessary for the irrigators to make 10 annual payments of \$3.66 per acre and subsequent annual payments of \$2 per acre. These estimates are preliminary and may be modified by more complete surveys.

The other project recommended is known as the Bismarck tract and lies in the vicinity of Bismarck. It contains 15,000 acres of irrigable land at elevations varying from 25 to 65 feet above the low water plane of the Missouri River at that point. It is proposed to irrigate this tract by the installation of two pumping plants, the first cost of which is estimated at \$250,000. The annual operating expenses are estimated at \$30,450.

Under the requirements of the Reclamation Act the irrigators will be required to pay 10 annual installments of \$3.70 per acre

and subsequent annual payments of \$2.03 per acre. These estimates are preliminary and may be modified by more complete surveys.

Most of the land under both projects is in private ownership and some of it in tracts which will require subdivision before it can receive the benefit of the Reclamation Act.

In view of the facts presented I have to recommend that you give your preliminary approval to these projects and that the Chief Engineer of the Reclamation Service be authorized to complete detailed investigations, plans, and estimates preparatory to construction.

I have to recommend further that the sum of \$550,000 be tentatively set aside in the reclamation fund for these two projects pending the results of final surveys, estimates, etc.

I have to recommend further that the Chief Engineer of the Reclamation Service be authorized to take proper steps to inform the landowners of the tracts proposed to be irrigated of the cost of the proposed works and annual operating expenses, and the requirement of the Reclamation Act regarding payments by water-users, etc., for the purpose of determining whether they will cooperate with the Government in the manner provided by the Reclamation Act in carrying out the two proposed reclamation projects herein described.

Very respectfully,

(Signed) H. C. RIZER,
Acting Director.

OFFICE OF THE SECRETARY,
Washington, November 18, 1904.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: In a letter of the 14th instant to the Department the Acting Director reported that reconnaissance surveys and investigations along the Missouri River in North Dakota have developed two feasible projects for irrigation by pumping methods in this region in connection with which it is proposed to use extensive beds of lignite in the vicinity for the production of pumping power.

The Acting Director states that under the first project, embracing the Buford-Trenton tract, 18,000 acres of irrigable land can be reached at elevations above the low water plane of the Missouri River varying from 25 to 85 feet, which it is proposed to irrigate by means of two pumping plants, the first cost of which is estimated at \$300,000, and the annual maintenance and operation charges at \$36,000, and that under the second project embracing the Bismarck tract, 15,000 acres of irrigable land, at elevations varying from 25 to 65 feet above the low water plane of the Mis-

souri River, may be irrigated by the installation of two pumping plants, the first cost of which is estimated at \$250,000, and the annual operating expenses of \$30,450. He has stated further that under the provisions of the Reclamation Act it will be necessary for the irrigators under the first project to make 10 annual payments of \$3.66 per acre and subsequent annual payments of \$2 per acre, and under the second project 10 annual installments of \$3.70 per acre and subsequent payments of \$2.03 per acre.

In view of the facts presented the Acting Director has recommended preliminary approval of the projects named, that the sum of \$550,000 be tentatively set aside in the Reclamation Fund for said projects and that the Chief Engineer of the Reclamation Service be authorized to complete detailed investigations, plans and estimates preparatory to construction. He has further recommended that the Chief Engineer be authorized to take steps to inform the landowners of the tracts proposed to be irrigated, of the cost of the proposed works, the annual operating expenses and the requirement of the Reclamation Act regarding payments by water-users, etc., for the purpose of determining whether they will cooperate with the Government in the manner provided by said act.

After consideration of the matter, I approve all of said recommendations, the sum of \$550,000, or so much thereof as may be necessary, is hereby set aside from the fund provided by the act of June 17, 1902— 32 Stat. 388— tentatively, for use in connection with said projects, and you are hereby authorized to take such action under the law to carry these projects to a successful conclusion and to inform the landowners concerned of the cost of the proposed works.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

BUFORD-TRENTON, WILLISTON AND NESSON PROJECTS

Williston, North Dakota, September 22, 1905.

CHIEF ENGINEER,

United States Reclamation Service, Washington, D. C.

SIR: We, the undersigned Board of Engineers, have visited and inspected the lands under survey and investigation in the vicinity of Buford, Williston and Nesson, Williams County, North Dakota. We have also carefully considered the result of the surveys made

by Mr. P. M. Churchill, Engineer, and his assistants, and the investigations and computations for pumping machinery and devices by Mr. H. A. Storrs, and the coal investigations and reports made by Mr. H. R. Evans.

BUFORD-TRENTON PROJECT

The land owners under this project organized a Water Users' Association and have subscribed to stock as shown in the attached ¹ supplement "A," 83% of the private lands being subscribed.

WILLISTON PROJECT

A petition for the development of an irrigation project by the Reclamation Service has been signed by the land owners in the vicinity as shown in the attached ¹ supplement "B." 88% of the private lands are represented by such signature.

NESSON PROJECT

A petition for the development of an irrigation project by the Reclamation Service has been signed by the land owners in the vicinity as shown in the attached ¹ supplement "C," 67 per cent of the private lands being represented.

FINDINGS

We find the lands in these various projects to be of good quality, well adapted to irrigation, and surrounded by general conditions which we believe render them suitable for irrigation in accordance with the Reclamation Act.

The water supply for irrigating these lands will be from the Missouri River. The low grade of the river, being 8 ft. per mile only, makes it impossible to take out a canal line by gravity for irrigating these lands.

The presence in the immediate locality of lignite deposits in veins of from 4 to 11 feet in thickness extending over areas of many square miles and on unpatented Government land, makes the pumping with fuel-generated power feasible. If it proves unfeasible to locate the power generating plants at the coal mines, the elevation of the veins will make transportation of the coal to the plants as they otherwise may be located entirely feasible, either by existing railroads with short spur extensions to the mines and pumping plants or by cheap electric or other transmission to be erected by the United States.

At Buford a railroad runs lengthwise through the tract. Williston is the division point of a transcontinental railroad. At Nes-

¹ Omitted from this publication.

son, although the lands are situated from 9 to 12 miles from a railroad, river transportation is available and two parties of surveyors representing two different railroads are now locating lines in the immediate vicinity. A third railroad is also apparently heading toward this vicinity.

We believe the best policy for the Reclamation Service and the interests of the land owners will be to develop and construct irrigation works on the progressive system, putting in pumping plants and ditches for a portion of the land in each project, and extending and increasing both the pumping plants and ditches as rapidly as is consistent with economical construction, giving the land owners, especially those on the bottom lands now partially covered with timber and brush, an opportunity and time to prepare their lands for irrigation and all the people in the vicinity a chance to perform such of the work as they may be able in constructing the canals.

ESTIMATES

We estimate, from the preliminary surveys and estimates made, that the cost of installing the power machinery and pumps and constructing the irrigating canals and laterals, will amount to approximately \$25 per acre, and the annual cost of administering, maintaining and operating the system to deliver two acre feet per acre, will amount to from \$1 to \$2.50 per acre per annum varying with the lift from about 30 to 100 feet.

POLICY

We recommend the immediate development of plans in the office, for the location of pumping plants and canal lines to develop the most satisfactory system for the irrigation of all the lands tributary to the project as surveyed, these canal lines and pumping plants to be designed and planned so that construction may be commenced at the earliest practicable date on an integral portion of the entire system in each project, for the irrigation of from 7,000 to 14,000 acres of land, with provision for increasing the pumping machinery by the addition of successive units and the construction of canal extensions and additional canals as conditions permit and the land owners get their land cleared up and graded and otherwise prepare it for irrigation.

RECOMMENDATIONS

Buford-Trenton. We understand that \$300,000 has been tentatively set aside for the Buford-Trenton Project. We recommend the setting aside of an additional \$325,000, making a total of \$625,000. This project is now estimated to have a total area of 25,000 acres.

Williston. We recommend the setting aside of \$1,000,000 for the

construction of this project, which has an area of approximately 40,000 acres.

Nesson. We recommend the setting aside of \$625,000 for the construction of this project, which has an area of approximately 25,000 acres.

We recommend that the land owners under these projects be advised to form Water Users' Associations to secure the signatures of the land owners in the usual way to pledge the return of the cost to the Reclamation fund.

Excess Holdings. We recommend that the holders of excess lands be required to give trust deeds for the excess lands, to the Water Users' Associations in the usual manner, to insure their sale to persons eligible to perfect water rights under the Reclamation Law.

Farm Unit. We recommend that homestead unit on public land contain not to exceed 80 acres of irrigable land. The security of the fund would be increased and the prosperity of the community enhanced if all farms were reduced to the above figure.

We recommend that the land owners in each of the above projects be notified that when they have complied with the above requirements and conditions, construction will be undertaken.

Water Users' Associations. We recommend that authority be secured to negotiate for rights of way for the canal lines and structures.

Very respectfully,

(Signed)

A. P. DAVIS.

H. N. SAVAGE.

O. H. ENSIGN.

H. A. STORRS.

PERCIVAL M. CHURCHILL.

UNITED STATES GEOLOGICAL SURVEY,
Washington, September 28, 1905.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: I have the honor to transmit herewith copy of a report, dated September 22, of a board of engineers with reference to the pumping projects in the vicinity of Buford, Williston, and Nesson, North Dakota.

It is respectfully recommended that the report of the board of engineers be approved, and that further investigations be authorized along the lines indicated in the report.

Very respectfully,

(Signed)

H. C. RIZER,

Acting Director.

OFFICE OF THE SECRETARY,
Washington, January 4, 1906.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: In a letter of September 28, 1905, to the Department you transmitted copy of a report dated September 22, of a board of engineers with reference to the pumping projects in the vicinity of Buford, Williston and Nesson, North Dakota, and recommended that the report of the board of engineers be approved and that further investigations be authorized along the lines indicated in the report.

Action was not taken on that report for the reason that its unqualified approval would have carried with it an appropriation of \$2,250,000.00 for the construction of said projects, action which I did not feel I would be justified in taking at that time until I was sufficiently advised as to the condition of the Reclamation Fund, correspondence in regard to which was then going on between this Department and your office.

On October 14, 1905, you submitted a statement of the condition of the Reclamation Fund to the Department in which it was estimated that there would be on hand June 30, 1908, in said fund an available balance of \$9,098,571.50, and you stated "It is proposed to recommend the allotment of this balance approximately as follows." Then followed a number of projects including the North Dakota pumping projects, \$1,000,000. As that statement indicated a modification of your views since the date of your letter of September 28 recommending the approval of the report of the engineers which would have carried an appropriation of \$2,250,000, I have further suspended action on your letter of September 28 awaiting the proposed recommendation referred to in your letter of October 14.

In this connection reference is had to your letter of the 28th ultimo reporting on a communication from the Secretary to the President, dated the 22nd ultimo, in reference to the North Dakota projects in which you say "In the later estimates sent to you I have assumed that a million dollars would be allotted for one or another of these pumping plants."

The Department would hardly have been justified in allotting a million dollars to any of these plants in the face of the statement in your letter of October 14 that "It is proposed to recommend the allotment of this balance approximately as follows:

* * * North Dakota Pumping Projects \$1,000,000." That proposed recommendation has not as yet been received, and the Department does not feel that your letter of the 28th ultimo can be properly regarded as such a recommendation.

Referring further to your letter of the 28th ultimo and the reference therein to the report of the engineers of September 22, 1905, this statement is noted: "This report contains several gen-

eral recommendations, particularly of policy to be pursued. It is important that the recommendations be acted upon as an essential preliminary to further progress." Also the statement "There are a number of details to be adjusted on the basis of your action upon my letter of September 28. Assuming that this action will be favorable, it is believed that advertisements can be issued for bids for construction during the early spring."

In this connection you are advised that your recommendation of September 28 was general in character, namely: "that the report of the engineers be approved and further investigations be authorized along the lines indicated therein." The unqualified approval of that report would have carried with it the approval of the recommendations as to appropriations from the Reclamation Fund, which I did not feel at that time I would be justified in making for reasons herein above stated.

The tone of your letter seems to imply that the failure of the Department to act upon your letter of September 28 has caused a delay in this matter, and that the responsibility for this delay is upon the Department. I disavow that responsibility utterly. Whenever a definite and specific recommendation on the report of the engineers of September 22, aside from the appropriations recommended by them, is submitted to the Department prompt consideration will be given thereto.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

UNITED STATES GEOLOGICAL SURVEY,
Washington, January 16, 1906.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: I have the honor to acknowledge the receipt of departmental letter of January 4, 1906, in regard to the pumping projects in the vicinity of Buford, Williston, and Nesson, North Dakota.

The report of the Board of Engineers dated September 22, 1905, submits estimates for these projects as follows:

		<i>Acres</i>
Buford-Trenton	\$625,000	25,000
Williston	1,000,000	40,000
Nesson	625,000	25,000
Total	2,250,000	

These sums are the estimated cost for the completion of the projects in question for the irrigation of approximately 90,000 acres.

As stated in my letter of December 28, 1905, there has been no

delay in the field work pending action upon the papers submitted to the Department, and estimates have been prepared concerning the cost of the construction necessary to begin the work and place under irrigation a certain proportion of the lands.

The projects in question are dependent upon pumping water from the Missouri River, and it is deemed best to develop them gradually, in order to study the conditions of handling pumping projects of lower lifts before engaging extensively on pumping work requiring higher lifts.

The three projects are located close together, and it is proposed to develop them at the same time.

The initial installation which appears to be most feasible involves the irrigation of about 12,000 acres under the Nesson Project, 7,000 acres under the Williston Project, and about 11,000 acres under the Buford-Trenton Project. The preliminary estimate for this initial installation and operating expenses is about \$1,000,000.

Under date of November 18, 1904, the Department tentatively set aside the amount of \$550,000 for pumping projects in North Dakota, of which \$250,000 was for what is known as the Bismarck Project, and \$300,000 for the Buford-Trenton Project.

It has been found that the landowners under the Bismarck Project are unwilling to comply with the requirements of the reclamation act and with the policy adopted by the Department in dealing with private landowners, and there seems to be no probability that the Bismarck Project would be ready for construction for a considerable time.

The Board of Engineers in its report of September 22 stated that the security of the government would be increased and the prosperity of the community enhanced if all the farms were reduced to an area not to exceed 80 acres of irrigable land.

The annual maintenance charges under pumping projects are necessarily higher than under gravity systems, so that the charges for large farms would be quite heavy and there would be less danger of default or difficulty in meeting them if the farms were 80 acres instead of 160 acres.

It is believed that the landowners having lands in excess of 160 acres will not object to subdividing the excess if they are allowed to hold 160 acres of their present holdings, and as the holders of such tracts have improved a certain portion of them at the present time, it is believed that they could carry the burden in question; while if the parties purchasing the excess lands were to take them in 80-acre tracts, the difficulty of large charges upon raw land would be to a considerable extent avoided.

Section 5 of the reclamation act provides that "no right to the use of water for land in private ownership shall be sold for a tract exceeding 160 acres to any one landowner." This leaves within the discretion of the Secretary of the Interior the decision as to the limit to be placed upon lands held by private landowners to be furnished with water under the project. I agree with the Board in its view that it would be to the advantage of the project if a limitation such as I have indicated were placed upon the lands.

In view of the conditions stated on page 2 of this letter, I recommend that the Department set aside the sum of \$450,000 to be used in connection with the \$550,000 already allotted for pumping projects in North Dakota for initial installation on the Nesson, Williston, and Buford-Trenton projects, making an allotment of \$1,000,000 for these three projects, upon the following conditions:

(1) That the landowners pledge themselves in the usual way, through the water users association, to return the cost to the reclamation fund;

(2) That the holdings of private lands in excess of 160 acres for which water is to be furnished be disposed of in tracts not exceeding 80 acres of irrigable lands;

(3) That the owners of irrigable lands in excess of 160 acres be required to dispose of them in the manner provided by the general form of contract for this purpose, heretofore approved by the Department.

Very respectfully,

(Signed) CHARLES D. WALCOTT,
Director.

OFFICE OF THE SECRETARY,
Washington, January 23, 1906.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: In accordance with the recommendation contained in your letter of the 16th instant, and in view of the conditions therein set forth, I hereby set aside from the reclamation fund the sum of \$450,000 to be used in connection with the \$550,000 already allotted for pumping projects in North Dakota, for initial installation on the Nesson, Williston and Buford-Trenton projects, making an allotment of \$1,000,000 for these three projects, upon the following conditions:

1. That the landowners pledge themselves in the usual way, through the water users association, to return the cost to the reclamation fund.

2. That the holdings of private lands in excess of 160 acres for which water is to be furnished be disposed of in tracts not exceeding 80 acres of irrigable lands.

3. That the owners of irrigable lands in excess of 160 acres be required to dispose of them in the manner provided by the general form of contract for this purpose, heretofore approved by the Department.

This leaves an estimated available balance on July 1, 1908, of \$1,423,571.50.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

CANCELLATION OF WATER-RIGHT CHARGES AND RELEASE OF LIENS ON BUFORD-TRENTON AND WILLISTON PROJECTS, NORTH DAKOTA

An act to cancel water-right charges and release liens on the Buford-Trenton and Williston irrigation projects, North Dakota, and for other purposes. (Act of May 26, 1926, ch. 395, 44 Stat. 653, Public Law 291, 69th Cong., 1st sess.)

That the Secretary of the Interior be, and he hereby is, authorized to cancel water-right charges of any and every kind in connection with the Buford-Trenton and Williston irrigation projects in North Dakota constructed under the act of Congress approved June 17, 1902 (Thirty-second Statutes at Large, page 388), and acts amendatory thereof or supplementary thereto, and to release or consent to the release of any and all liens however created and now existing against lands of said projects on account of said water-right charges.

SEC. 2. The Secretary of the Interior is authorized to do any and all things necessary to give full effect to the provisions of this act.

NEW BISMARCK PROJECT (W. C. U.)

THE SECRETARY OF THE INTERIOR,
Washington, April 5, 1940.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: A brief description of the Bismarck irrigation project in North Dakota and recommendations for its construction under the provisions of the \$5,000,000 appropriation item in the Interior Department Appropriation Act of 1940 for construction of water conservation and utilization projects are contained in an attached letter.

If you approve the recommendation, you may wish to send the letters which are enclosed² to the Secretary of the Treasury and to the Commissioner of the Work Projects Administration.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

² Omitted from this publication.

THE SECRETARY OF THE INTERIOR,
Washington, April 5, 1940.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: The Interior Department Appropriation Act, 1940, contains an appropriation of \$5,000,000 from which allocations may be made by you.

For construction, in addition to labor and materials to be supplied by the Work Projects Administration, of water conservation and utilization projects, * * * in the Great Plains and arid and semi-arid areas of the United States, * * *

All expenditures from the appropriation and as much of the expenditures from the funds of the Work Projects Administration as the President directs are to be repaid. Hereinafter the appropriation item will be termed the "1940 Water Conservation Appropriation."

The Bismarck irrigation project near Bismarck in Burleigh County, North Dakota, is the type of project that is contemplated to be constructed under the provisions of this item. It is included in the projects recommended by the Northern Great Plains Committee in its 1938 report to you, and subject to the provisions contained herein, I concur in this recommendation.

The lands to be irrigated, comprising approximately 4,800 acres, are situated on the east side of the Missouri River, directly south of Bismarck. They lie in a strip from 1½ to 2 miles wide between the Missouri River and a high bench to the east. Water for irrigation is to be obtained from the Missouri River, pumped to a height of approximately 20 feet, and conveyed to the land by ten miles of canals and a system of laterals, sub-laterals, and farm ditches. It is planned to secure electrical energy for pumping from the North Dakota Power and Light Company.

A market for crops will be provided by the City of Bismarck and access to other markets will be furnished by the main line of the Northern Pacific and a branch line of the Minneapolis, St. Paul & Sault Ste. Marie Railway which pass through Bismarck. The crops will include hay and other feed crops, small grains and vegetables. Dairying probably will become an important industry.

Some of the land holdings are in large tracts, and it will be desirable to subdivide these to the extent that not more than an adequate sized unit of irrigable lands, in the opinion of the Secretary of Agriculture, is held in one ownership, and tenancy on irrigated lands should be permitted only if the best use of the land and the interests of the tenants are assured. A considerable part

of the project will be settled with distressed drought-stricken farmers.

Partial flooding the area has occurred during the icebreak in the early spring months, or during the flood crest in early summer, for 12 of the last 57 years. Serious damage to the irrigation system would not occur from the overflow, but it would be detrimental to houses and other improvements in the project and cause some damage to crops. The overflow can be prevented by a levee along the river bank, and the Corps of Engineers, U. S. Army, is now investigating the feasibility of a levee project. It would be desirable to place the settlers directly on the lands, but if flood control is found to be infeasible, the project may be developed as a community type, the farmers' homes and other buildings being located on the high ground immediately to the east of the irrigable lands.

Construction of the irrigation features should be undertaken by the Bureau of Reclamation, which has already completed plans and preliminary designs, Bureaus of the Department of Agriculture are expected to arrange for settlement, repayment of reimbursable charges and the operation and maintenance of the project. The Department of Agriculture will include farm ditches and rough land leveling in the construction program and will obtain control of the lands by purchase and subsequent sale or lease to the settlers. Funds for the purchase of the lands are already available to the Department of Agriculture.

The total estimated cost of construction is \$590,000. The experience of the Bureau of Reclamation on projects which are similarly located indicates that the water users will be able to repay at least \$250,000 of this amount over a period of forty years and in addition carry the annual cost for electrical energy, other operation and maintenance, and probably all land purchase charges. This latter sum should be obtained from the 1940 Water Conservation Appropriation and be expended primarily for administration, supervision, materials, supplies, and rights of way. The remaining amount of \$340,000 required to construct the project is expected to be provided by the Work Projects Administration and to be expended largely for relief labor. A tabulation is attached in which is shown a tentative breakdown of expenditures from the two funds. The estimate of expenditures from WPA funds is based on the experience of the Bureau of Reclamation on construction with relief forces under the legislative provisions in effect prior to the fiscal year 1940. The efficiency with which the work can be conducted under the present WPA act is not known. Therefore, the estimate of WPA funds may need revision at some later date.

I recommend that the construction of the Bismarck project be undertaken by the Bureau of Reclamation; that the land development program and the arrangements for settlement, repayment, and operation and maintenance be conducted by the Department of Agriculture; and that assistance be given by the National Resources Planning Board in the planning and coordinating field.

I recommend that an allocation of \$250,000 from the 1940 Wa-

ter Conservation Appropriation be made to the Department of the Interior, Bureau of Reclamation, and that the Work Projects Administration be requested to give prompt consideration to the project's application which will be filed by the Bureau of Reclamation to secure the remaining \$340,000 needed for construction of the Bismarck project. The allocation from the 1940 Water Conservation Appropriation is, of course, to be reimbursable as required by law. The extent that funds expended on the project beyond this allocation can be made reimbursable will be made the subject of a further report and recommendation to you when the project is completed.

The Department of Agriculture and the National Resources Planning Board will be reimbursed for all services connected with the construction of the project by transfers or advances from the funds made available to the Department of the Interior, Bureau of Reclamation, for construction of the project.

Letters containing the comments of the Department of Agriculture and the Work Projects Administration are enclosed.

Actual construction will not be started until the Department of Agriculture has made sufficient progress in its efforts to obtain control of the land at prices which do not exceed appraised valuation, to insure the successful operation of the project. The time required for construction will depend largely on the availability of relief labor but probably will not exceed two years.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved April 26, 1940.

(Signed) FRANKLIN D. ROOSEVELT,
President.

NEW BUFORD-TRENTON PROJECT (W. C. U.)

OFFICE OF THE SECRETARY,
Washington, August 23, 1939.

THE PRESIDENT,

The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: The Interior Department Appropriation Act, 1940, contains an item of \$5,000,000 from which allocations may be made by you:

For construction, in addition to labor and materials to be supplied by the Works Progress Administration, of water conservation and utilization projects, * * * in the Great Plains and arid and semiarid areas of the United States, * * *

All expenditures from the appropriation, and as much of the expenditures from the Work Projects Administration fund as the President determines, are to be considered reimbursable. Hereinafter the appropriation item will be termed the "1940 Water Conservation Appropriation."

A request for an allocation for the Second Division of the Buffalo Rapids project on the Yellowstone River in Montana was submitted to you recently. Approximately 90 miles downstream from the Second Division and immediately beyond the confluence with the Missouri River is another area of 13,400 acres of fertile land which could be brought into cultivation by the construction of irrigation works under plans proposed by the Bureau of Reclamation for the Buford-Trenton project. The lands lie on the north side of the Missouri River, in Williams County, North Dakota, and extend from Buford, past Trenton, nearly to Williston. All are river bottom lands of high fertility and are well adapted to irrigation.

The subnormal precipitation in practically every year since 1929 has greatly decreased crop production on dry farmed lands and caused a marked decline in the agricultural and livestock industry of western North Dakota. A report of the Bureau of Reclamation completed in 1938 showed that in Williams County the harvested area had decreased more than 400,000 acres, 65 percent of all farms were delinquent in tax payments, the number of horses, cattle, sheep and hogs had decreased more than 50 percent, and 15,000 out of a total population of 19,000 were supported by direct relief or Federal labor projects.

The project is urgently needed to stabilize the agricultural and livestock industries in the region. Its construction conforms to the intent of the 1940 Water Conservation Appropriation and has been approved by the Northern Great Plains Committee. I recommend, therefore, that the Buford-Trenton project be built in accordance with the provisions of the 1940 Water Conservation Appropriation item.

Water for the irrigation of the project lands will be obtained from the Missouri River. The principal features to be constructed are a pumping plant of 30 foot maximum lift and 245 cubic feet per second capacity, 15 miles of main canal of 250 cubic feet per second initial capacity, 6 miles of laterals and several sublaterals, all necessary farm ditches, and a drainage system. Rough land leveling also will be included in the construction program. Electrical energy required for pumping will be obtained from the plant to be installed at the Fort Peck Dam and will be delivered by transmission lines already in existence or to be erected by the Bureau of Reclamation with funds specifically appropriated for that purpose.

The crops which will be raised on the project primarily will be forage and small grain to be used in the support of the livestock industry. The main line of the Great Northern Railroad passes through Buford, Trenton and Williston, thus providing ready access to markets. Any large land holdings will be divided into farm units of more desirable size and a part of the project will

be settled with destitute, drought-stricken farmers. Settlement will be guided and education will be given in irrigation procedure. Control of the land is expected to be obtained through option agreement or purchase, using funds already available to the Department of Agriculture. An irrigation district, or similar type of organization, will be formed to contract for the collection of construction charges and to operate the project after it is constructed.

The estimated cost of construction is \$1,500,000. The experience of the Bureau of Reclamation on projects which are similarly situated indicates that the water users will be able to repay at least \$630,000 of this amount over a period of forty years, and in addition to carry the annual cost for electrical energy, other operation and maintenance, and any land purchase charges. This sum should be obtained from the 1940 Water Conservation Appropriation and be expended primarily for administration, supervision, materials, supplies and rights of way. The remaining amount of \$870,000 required to construct the project is expected to be provided by the Work Projects Administration and to be expended largely for relief labor. A tabulation is attached ⁵ in which is shown a tentative breakdown of expenditures from the two funds. The estimate of expenditures from WPA funds is based on the experience of the Bureau of Reclamation on construction with relief forces under the legislative provisions in effect prior to F. Y. 1940. The efficiency with which the work can be conducted under the new WPA Act is unknown. Therefore, the estimate of WPA funds required may need revision at some later date.

I recommend that the construction of the Buford-Trenton project be undertaken by the Bureau of Reclamation; that the land development program and the arrangements for settlement, repayment, and project operation be conducted by bureaus of the Department of Agriculture; and that assistance be given by the National Resources Planning Board in the planning and coordinating field.

I recommend that an allocation of \$630,000 from the 1940 Water Conservation Appropriation be made to the Department of the Interior, Bureau of Reclamation, and that the Work Projects Administration be requested to give prompt consideration to the project applications which will be filed by the Bureau of Reclamation to secure the remaining \$870,000 needed for the construction of the Buford-Trenton project.

The Department of Agriculture and the National Resources Planning Board will be reimbursed for all services connected with the construction of the project by transfers or advances from the funds made available to the Department of the Interior, Bureau of Reclamation, for construction of the project. Letters containing the comments of the Department of Agriculture and the Work Projects Administration are enclosed.³

It is contemplated that actual construction will not be started

³ Excluded from this publication.

until the Department of Agriculture has made sufficient progress in its effort to obtain control of the land, at prices which do not exceed appraised valuations, to insure the successful operation of the project. The time required for the construction of the project will depend largely on the availability of relief labor and may extend to two or three years.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved SEPTEMBER 23, 1939.

(Signed) FRANKLIN D. ROOSEVELT, *President.*

OFFICE OF THE SECRETARY,
Washington, July 22, 1942.

THE PRESIDENT,
The White House.
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: On September 23, 1939, you approved the construction of the Buford-Trenton irrigation project in Williams County, near the towns of Buford and Trenton, North Dakota. Construction began on May 6, 1940, for the development of 13,400 acres. During the early construction period, excellent progress was made possible with labor supplied through the Civilian Conservation Corps and the Work Projects Administration. However, the labor turnover was great due to the WPA workers accepting employment elsewhere after they had received training on project construction. This situation increased the cost of operations and the costs were further increased by the rise in the prices of material and equipment from the time the project was initiated.

It had also become apparent early in construction that there were possibilities for bringing in an additional area of land by slight changes in canal locations and capacities at a comparatively slight increase in cost. These changes were made, and it is now found that an additional 1,400 acres can be added to the project.

The increase in cost brought about by the three items mentioned above makes it necessary to obtain an additional allotment to complete the work. The economic feasibility is not affected adversely, since the project acreage has been increased.

The project purpose and plan of development are the same as outlined in my report to you dated August 23, 1939, on the Buford-Trenton project which you approved September 23, 1939. A copy of this report is attached. In spite of the decreasing labor market and the increasing difficulties in obtaining materials and supplies, the project is now over 80 percent complete, and a little additional effort at this time will bring the lands into pro-

duction in the summer of 1943. The work now remaining largely comprises the completion of the main canal, laterals, and pumping plant, which involves principally excavation, land leveling, and installation of materials on hand, so that few strategic materials are required. An application has been submitted to the War Production Board covering the needed materials. The total value is \$19,588, of which approximately 50 percent is for materials such as cement, construction lumber, and wood poles, which are not considered critical.

It is estimated that the Bureau of Reclamation will require \$138,000 of reimbursable funds for construction purposes on the expansion. A similar amount of reimbursable funds is requested by the Department of Agriculture, in addition to \$170,000 expected to be provided from Civilian Conservation Corps, Work Projects Administration, or other nonreimbursable funds. A tabulation which follows indicates a tentative breakdown of expenditures from the two funds. In addition to the reimbursable costs, it is believed that the water users will be able to carry the annual costs of electrical energy, other operation and maintenance costs and any other land purchase charges. The estimated funds required from the Special Fund for construction and land development are, however, in excess of the unallocated amount remaining in the appropriation item for Water Conservation and Utilization projects.

It is recommended that the sum required for construction of this expanded project be obtained by rescinding the money previously allotted for the Bismarck irrigation project in Burleigh County, North Dakota. Other money required for labor and a small amount of materials, supplies, and equipment should be provided by the Work Projects Administration, Civilian Conservation Corps, or similar agency.

The Bismarck project was approved by you on April 26, 1940, under the terms of the Interior Department Appropriation Act of 1940. The original plan was to acquire agricultural lands in the project area, and to break these holdings down into family-size tracts not to exceed 160 acres. In the Bismarck area, where rehabilitation is an important part of the development, this limitation on acreage seems particularly desirable. Since the time you approved this project, negotiations have been carried on for the acquisition of the lands, but have been unsuccessful, due to the reluctance of certain landowners having large holdings in the project area, to dispose of them. While considerable interest is still being shown in this development by farmers who desire and need such a project, it is believed that further consideration of the project should be deferred until some assurance is received that those landowners who now hold lands in excess of 160 acres, will be willing to dispose of them.

In view of the above facts, I recommend that by your approval of this report, you find that the allotment of \$250,000 previously made for the Bismarck irrigation project should be and is rescinded and, further, that this sum and \$26,000 to be allocated from the unallocated funds remaining in the 1940 appropriation

item for Water Conservation and Utilization projects are herewith allotted to the Bureau of Reclamation for the expansion of the Buford-Trenton project to include 1,400 acres of land within the original project area which have been determined to be feasible for irrigation development.

A report containing the recommendation of the Secretary of Agriculture is enclosed.⁴

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE.

Approved AUGUST 7, 1942.

(Signed) FRANKLIN D. ROOSEVELT,
President.

THE SECRETARY OF THE INTERIOR,
Washington 25, D. C., January 30, 1945.

THE PRESIDENT,

The White House.

(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: On September 23, 1939, you authorized the Bureau of Reclamation to construct the Buford-Trenton irrigation project in Williams County, North Dakota, under the terms of the \$5,000,000 item in the Interior Department Appropriation Act of 1940.

During the construction of the project, it was found upon reclassification of the project lands that an additional 1,400 acres could be included within the project area. Accordingly, I recommended the inclusion of these lands and you approved my recommendation on August 7, 1942. Copies of the papers relating to both approvals are attached.

Under the terms of your approval, the Bureau of Reclamation was to construct the irrigation features of the project and the Department of Agriculture was to supervise land development and settlement activities. The Bureau of Reclamation completed construction activities in the spring of 1943 and a memorandum of understanding transferring the project from the Department of the Interior to the Department of Agriculture was executed by the respective Departments and approved by you on January 27, 1944. A copy of these papers is attached also.⁴

There is enclosed a copy of a letter dated May 15, 1944, addressed to me from the Assistant War Food Administrator trans-

⁴ Excluded from this publication.

mitting the enclosed letter dated May 15, 1944, addressed to you from the Assistant War Food Administrator, acting in the stead of the Secretary of Agriculture. These letters outline the program proposed to be undertaken by the Department of Agriculture, under the provisions of Section 4(d) of the Act of October 14, 1940 (54 Stat. 1119) as amended by the Act of July 16, 1943 (Public Law 152, 78th Congress). The program appears to be one coming within the scope of the authority of that Act and in my judgment, the work proposed by the Assistant War Food Administrator should be undertaken by the Department of Agriculture as an aid in the production of needed agricultural products.

Since the Bureau of Reclamation has completed the construction of the pumping plant, canal system, and pertinent works for this project, and the Department of Agriculture has completed approximately 34 per cent of the work for which it is responsible, it appears desirable for the Department of Agriculture to continue with land development and settlement activities as rapidly as possible. To perform this function, it is estimated that the Department of Agriculture will require an allotment of \$395,000. The details of the financing arrangements are set forth in Mr. Cowen's letter.

You will note that Mr. Cowen recommends that the sum of \$395,000 be obtained by rescinding \$349,594.58 from the unexpended balance of funds allocated for the use of the Department of Agriculture on the Saco Divide project in Montana, and that \$50,000 be rescinded from sums allocated to the Department of Agriculture on the Eden Valley project in Wyoming. The above sum of \$349,594.58 represents the balance remaining out of the \$350,000 heretofore allocated for the use of the Department of Agriculture on the Saco Divide project. The papers relating to the project, which were approved by the President on April 11, 1941, provided that \$150,000 of the \$350,000 would be allocated directly to the Department of Agriculture and \$200,000 would be allocated to the Department of the Interior for the use of the Department of Agriculture.

I concur in Mr. Cowen's statements and recommend that you approve this report.

Sincerely yours,

(Signed) ABE FORTAS,
Acting Secretary of the Interior.

THE WHITE HOUSE.

Approved MARCH 14, 1945.

(Signed) FRANKLIN D. ROOSEVELT,
President.

BUFORD-TRENTON PROTECTION AND IMPROVEMENT WORK

[Extract from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1954, and for other purposes. (Act dated July 31, 1953, 67 Stat. 261, 266, Public Law 172, 83d Cong., 1st sess.)

* * * * *

Construction and rehabilitation: For construction and rehabilitation of authorized reclamation projects or parts thereof (including power transmission facilities) and for other related activities, as authorized by law, to remain available until expended, * * *

Provided further, That the Bureau of Reclamation is authorized to expend not to exceed \$300,000 for emergency flood protective work and minor completion work on the irrigation system of the Buford-Trenton Project, of which the portion thereof found by the Secretary to be properly allocable to irrigation pursuant to allocations to be made under section 7 (b) of the Reclamation Project Act of 1939 shall be repaid under terms satisfactory to the Secretary and to the water users: * * *

BURNT RIVER PROJECT

OREGON

The Burnt River project was authorized by the Secretary on September 25, 1935, under the provisions of section 4 of the act of June 25, 1910 (36 Stat. 836), and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702).

THE SECRETARY OF THE INTERIOR,
Washington, September 25, 1935.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The Supreme Court of the United States in the Parker Dam decision (*United States v. State of Arizona*) indicated that Section 4 of the act of June 25, 1910, 36 Stat. 835, is applicable to irrigation projects constructed under the National Industrial Recovery Act, and this report upon the Burnt River project is made to you under said statute of 1910 and under Subsection B of Section 4 of the act of December 5, 1924, 43 Stat., 701.

Section 4 of the act of June 25, 1910, provides, in effect that after the date of that act no irrigation project to be constructed under the act of June 17, 1902, 32 Stat., 388, and acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924, 43 Stat., 701, provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

Under date of August 13, 1935, an allotment of \$500,000 was approved for the construction of a storage reservoir on the Burnt River in Oregon, which allotment is now available.

The water stored in the proposed reservoir will be used for the benefit of some 15,000 or more acres of land in the Burnt River Valley in Oregon, which has been settled and partially irrigated for many years but has suffered severely from water shortages and resulting crop losses on account of an insufficient flow of water in this stream during the last half of the irrigation season.

The land to be benefited is located partly above and partly below the proposed reservoir. The lands above the reservoir will be benefited by exchanging reservoir water for natural flow water belonging to prior rights below the reservoir, thus enabling the lands above the reservoir to secure the natural flow which would otherwise have to be turned down to supply the prior rights below. The lands to be benefited are now embraced in the Bridgeport Irrigation District, which district has been recently enlarged to include all the land for which an improved water supply is to be furnished by means of the proposed reservoir (both the land above and below the reservoir). I am advised that the name of this district will be changed shortly to the Burnt River Irrigation District. This district is preparing to enter into a contract with the United States to repay the cost of work over a term of 40 years without interest. Contracts will be made with the district and with the landowners thereof in the endeavor to prevent the furnishing of stored water leading to a substantial rise in the land values. Each owner of more than 160 acres of land to be irrigated by the additional water supply will be required to enter into a contract to sell the excess at or below prices fixed therefor by the Department.

The proposed reservoir is to be constructed at the site commonly known as the Unity reservoir site, the dam forming the reservoir to be located across Burnt River near the point where the North Fork, West Fork, Middle Fork, and South Fork of Burnt River come together.

It has been estimated that a reservoir with a capacity of 25,000 acre-feet can be constructed at this site at a cost of \$550,000. A slightly smaller reservoir can be constructed at a cost not exceeding the \$500,000 which has been allotted for this purpose.

Studies which have been made by the Bureau of Reclamation indicate that the water supply is adequate for the proposed reservoir, that the construction of the proposed dam is feasible from an engineering standpoint, and that the dam can be built within the cost of \$500,000 allotted for that purpose, which the Irrigation District is to agree to pay. The reservoir will not be constructed if, upon calling for bids, it is found that the cost of the dam will overrun the \$500,000 allotment, but in that event the bids will be rejected and bids called for on a somewhat smaller reservoir, the cost of which can be kept within the \$500,000 allotment.

This storage will provide additional water urgently needed for irrigated lands in the Burnt River Valley and afford a better water supply for several towns in that valley including the town of Huntington, Oregon, which is a railroad division point on the Union Pacific System.

I find that the project is feasible, that the land watered thereby is adaptable for actual settlement and farm homes, and that the landowners benefited by the project will be able from the agricultural produce of the lands irrigated by the reservoir to return the cost of the development to the United States, and that the project probably will return the cost thereof to the United States.

I recommend that the project be approved and that the neces-

sary authority be issued to the Department to make contracts for the construction of the project and to proceed with the work.

Sincerely yours,

(Signed) CHARLES WEST,
Acting Secretary of the Interior.

Approved¹.

....., *President.*

THE WHITE HOUSE,
Washington, August 13, 1935.

The Honorable the SECRETARY OF THE TREASURY.

MY DEAR MR. SECRETARY: By virtue of the authority vested in me under the Emergency Relief Appropriation Act of 1935, approved April 8, 1935, it is requested that the following funds be transferred from the appropriation made in said Act to the Department of the Interior, Reclamation Service, for the purposes indicated below:

Amount: \$3,640,000.

Purpose: For the construction of works for irrigation and reclamation in accordance with the attached schedule of projects, provided that the funds hereby allocated shall be reimbursable in accordance with the reclamation laws. Subject to the application of Title III of the Treasury and Post Office Appropriation Act, fiscal year 1934, to the acquisition of articles, materials and supplies for use in carrying out such projects. (O.P. No. 5-17; 5-21; 5-25; 5-28 to 5-33 and 5-38.)

Sincerely yours,

(Signed) FRANKLIN D. ROOSEVELT,
President.

Location	Character of work	Allotment	Project number
Oregon—Brogan and Malheur Counties.	Burnt River Project—Construction of a reservoir to furnish a supplemental water supply to lands lying along Burnt River immediately to the north of Willow Creek.	\$500,000	O.P. 5-17
NEC 1317-----	This project is to provide storage on the Burnt River, Oregon, to supplement the water supply for lands now under cultivation so as to insure the production of more profitable crops on lands that are frequently faced with a serious shortage. A contract will be entered into with the water users organization to repay construction cost, and to assume the expense of operating and maintaining the project. The project will be completed with this allotment.		

¹ The above is a copy of a letter in files of the Department of the Interior. Thorough search has failed to disclose the original letter bearing the signature of the President and accordingly it is presumed to be lost or destroyed. The letter dated August 13, 1935, approving an allotment of \$500,000 under the Emergency Relief Appropriation Act of 1935 for this project for the purpose indicated above and bearing the signature of the President, is on record.

CACHUMA PROJECT

CALIFORNIA

The Cachuma project, originally called Cachuma unit, Santa Barbara project, was found feasible and authorized by the Secretary on March 4, 1948, under the provisions of the Reclamation Project Act of 1939.

UNITED STATES DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D. C., December 22, 1947.

Subject: Cachuma unit of the Santa Barbara County project, California.

THE SECRETARY OF THE INTERIOR.

SIR: In October 1945, a report entitled, "Comprehensive Basin Plan—Santa Barbara County Project, California", dated June 1945, which was adopted by former Secretary Ickes as his proposed report on October 19, 1945, was submitted to the Secretary of War and to the State of California for their views and recommendations pursuant to the requirements of the Flood Control Act of 1944. At the same time, that report was submitted to the Department of Agriculture, the Federal Power Commission, and the Santa Barbara County water agency. Following receipt of the views of these agencies the report was submitted to the President through the Bureau of the Budget. On September 24, 1946, the Director of the Bureau of the Budget advised you that the report could not at that time be considered to be in accord with the program of the President. While there was uniform agreement as to the urgent need for enlarging the water supply for the south-coast area to satisfy the needs of both irrigation and municipal demands, and there were no important objections to that portion of the comprehensive plan which would accomplish this, it was evident from the nature of the comments received that, because several units of the comprehensive plan will not be needed in the immediate future, it would be wise to investigate in more detail various related factors before adoption of a comprehensive basin-wide plan.

Accordingly, at my request and because of the urgency of supplying water to the south-coast area, the regional director has concentrated his activities toward that purpose. His investigations fully warrant immediate action toward development of the Cachuma unit of the Santa Barbara County project to meet this need. The further investigations have been carried on with the material assistance of and in close cooperation with the officials of the Santa Barbara County water agency, the cities and towns concerned, the irrigation interests, and the county itself, which has participated in the financing of these investigations.

The basic structures required for this unit include a reservoir on the Santa Ynez River, a transmountain diversion tunnel, a conduit along the south coast, and lateral distribution systems. Local officials are in agreement on the proposed development as attested by resolutions, copies of which are attached to the regional director's report.

The new report by the regional director, dated November 20, 1947, which I approve, is attached, and recommends approval and authorization only for those works necessary to relieve the critical south coast-water problem. That report supersedes his report dated June 18, 1945, copy of which is also attached with its substantiating materials and the comments received upon it. The principal revisions as provided in the new report are:

(a) The new report asks for approval and authorization of the reconstruction of the Cachuma unit, consisting of Cachuma Reservoir on the Santa Ynez River, a transmountain diversion through the Tecolote Tunnel to the south-coast area, the Goleta-south-coast conduit, and lateral distribution systems in the south coast area.

(b) No recommendation is made at this time for a nonreimbursable allocation of a portion of the costs of Cachuma Reservoir to flood control.

(c) Data relating to the proposed charges for water are included in the report, and the benefits anticipated are measured on a net basis rather than upon the basis of gross crop returns.

(d) The revised report recommends that the entire cost of construction be repaid by the irrigation and municipal water users instead of permitting the writing off of an undetermined portion of the construction costs.

The county board of supervisors and the representatives of the Governor of California, being particularly familiar with water conditions in the area, have urged that prompt action be taken to secure authorization for this initial unit of the basin plan in view of the critical water shortage now felt in the area. The county has already secured enabling State legislation which will permit the county to enter into contracts with the United States to carry out the plan of development and to enter into contracts for the return of the reimbursable costs of the project works to the United States.

Estimated cost of the Cachuma unit at present construction-cost levels is \$28,610,000 for the dam, transmountain diversion

tunnel, and conduit, and \$3,700,000 for lateral distribution systems. The return of the construction costs of the dam, tunnel, and conduit within approximately 50 years can be reasonably assured by contracts between the United States and the Santa Barbara County water agency under sections 9 (e) and 9 (c) of the Reclamation Project Act of 1939. Construction costs of the lateral distribution systems will be returned under contracts made pursuant to section 9 (d) of that act.

The works proposed for authorization herein are the practical minimum necessary to avert and remedy a critical water shortage affecting the city of Santa Barbara and the adjacent south coast irrigation area. The proposed works have engineering feasibility. The total estimated cost of the proposed construction is \$32,310,000. The part of the estimated cost which can properly be allocated to irrigation and probably be repaid by the water users is \$20,164,000. The part of the estimated cost which can properly be allocated to municipal water supply or other miscellaneous purposes and probably be returned to the United States is \$12,146,000. The total of the foregoing repayable and returnable allocations equals the total estimated cost of construction.

I recommend that you approve and adopt this report as your proposed report on the Cachuma unit of the Santa Barbara County project to supersede the proposed report of 1945 entitled, "Comprehensive Basin Plan—Santa Barbara County Project," and that you authorize me, in your behalf, to transmit it to the Secretary of the Army and to the State of California in accordance with the provisions of section 1 of the Flood Control Act of 1944 (58 Stat. 887), and to the head of the agency of the State of California exercising administration over the wildlife resources of that State in accordance with the provisions of the act of August 14, 1946 (60 Stat. 1080).

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved and adopted January 7, 1948.

(Signed) J. A. KRUG,
Secretary of the Interior.

BUREAU OF RECLAMATION,
Washington, March 2, 1948.

THE SECRETARY OF THE INTERIOR.

SIR: Herewith is my report on the Cachuma unit of the Santa Barbara County project, California.

In your behalf I submitted copies of the report, which you adopted on January 7, 1948, as your proposed report, to the Secretary of the Army and to the State of California in accordance

with the Flood Control Act of 1944 (58 Stat. 887), and to the head of the agency of the State of California exercising administration over the fish and wildlife resources of the State in accordance with the provisions of Public Law 732, Seventy-ninth Congress (60 Stat. 1080).

Copies of the replies are attached. As a result of these reviews, the State of California recommends, among other things, immediate authorization of the project, and that funds be appropriated in this session of the Congress for commencement of construction. The Secretary of the Army states that the proposed project would not conflict with contemplated plans of the Corps of Engineers.

Accordingly, it is recommended that you adopt your proposed report of January 7, 1948, as your report; that you find the Cachuma unit of the Santa Barbara County project to be feasible in accordance with the provisions of section 9 (a) of the Reclamation Project Act of 1939; and that you transmit it, together with the attached comments, to the President and subsequently to the Congress.

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved and adopted March 4, 1948.

(Signed) J. A. KRUG,
Secretary of the Interior.

OFFICE OF THE SECRETARY,
Washington, March 4, 1948.

THE PRESIDENT,

The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: My report on the Cachuma unit of the Santa Barbara County project, California, is enclosed, pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939.

Increased population, with consequent overdemand upon the limited ground-water supplies, coupled with gradual siltation of the major surface water supply reservoir now places the city of Santa Barbara and adjacent urban and south coast agricultural areas in an extremely vulnerable position. The drought of the past 2 months has emphasized the seriousness of the situation. A critical or extended drought could cause hardship of disastrous proportions. The enclosed report, which recommends authorization of the Cachuma unit of the Santa Barbara County project is designed to remedy this situation and has the added advantage that it will produce an early water supply from the tunnel ex-

cavations that can be utilized even before the new storage reservoir is completed.

The Commissioner of Reclamation, acting on my behalf, has obtained the written views of the State of California, and of the Secretary of the Army in accordance with the requirements of the Flood Control Act of 1944. Copies of the letters expressing these views are attached.¹ The State of California includes in its views the recommendation that the project be authorized immediately and that funds be appropriated this session to initiate construction. The Secretary of the Army advises that the proposed project will not conflict with contemplated plans of the Corps of Engineers. The recommendations of the director of natural resources of the State of California, secured in accordance with the requirements of Public Law 732, Seventy-ninth Congress, are included with the comments of the State of California, and are also favorable.

I find that the proposed construction has engineering feasibility; that the estimated cost of the proposed construction is \$32,310,000; that the part of the estimated cost which can properly be allocated to irrigation and probably be repaid by the water users is \$20,164,000; and that the part of the estimated cost which can properly be allocated to municipal water supply or other miscellaneous purposes and probably be returned to the United States is \$12,146,000. The total of the foregoing repayable and returnable allocations equals the total estimated cost of construction. Consequently, I find, pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939, that the Cachuma unit of the Santa Barbara County project is authorized for construction.

In making these findings, I am fully cognizant of the suggestion of the State of California with respect to the possibility of increased costs which may or may not eventuate. Any increase or decrease in costs will, of course, be reflected in extensions or reductions, as the case may be, of the period during which construction costs are returned by collections from irrigation, municipal and other water-supply users. If experience should indicate costs exceeding the estimates contained in this report, the water rates to be paid by the water users should remain the same as herein proposed until the actual cost is repaid. The proportion of total costs returned by the irrigation water users and the municipal and other water users, respectively, would remain approximately the same.

Unless you have objection, the report and the other documents enclosed will be transmitted to the Congress in accordance with the provisions of the Reclamation Project Act of 1939.

Sincerely yours,

(Signed) J. A. KRUG,
Secretary of the Interior.

¹ Excluded from this publication.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, March 24, 1948.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This will acknowledge receipt of your letter dated March 4, 1948, enclosing a copy of your proposed report on the Cachuma Unit of the Santa Barbara County project and advising that pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939, you have found it feasible and have authorized it for construction.

I note that the proposed repayment plan provides, on the basis of the estimates contained in the report, for the return of the cost of the project in about 50 years. Your letter states that any increase or decrease in construction costs will not be covered by adjustments in water rates but will be reflected in extensions or reductions, as the case may be, of the period during which construction costs are returned by collections from irrigation, municipal and other water-supply users. It has been my understanding that Reclamation law has generally been interpreted to require repayment of the cost of construction without interest in 40 years plus the 10-year development period where applicable. In those cases where this is impossible but other considerations appear to justify the project regardless, Congress has from time to time authorized their construction with provisions for longer repayment periods. I have also been advised that this is the first project found feasible on the basis of repayments being obtained through outright sale of water under the provisions of sections 9 (c) and (e) of the Reclamation Project Act of 1939. In view of the above it appears to me that we should move cautiously in any action which might set a precedent for approving projects involving a departure from the customary 40-year repayment period policy contemplated under existing Reclamation laws. However, since the subject report involves an improvement of outstanding merit, it would appear to justify its authorization as an exceptional case.

I also note that the submission contains no comments of the Department of Agriculture and the Federal Power Commission on the proposed plan of improvement. In view of the fact that the Department of Agriculture had raised questions on the previous report, this office has inquired of that agency as to its views on the revised report. Representatives of the Department of Agriculture stated that while they have not completed their detailed review and while they may raise minor questions on certain items, there would be no objection to the submission of the report to the Congress in its present form. The Federal Power

Commission advises that the comments made on the original report would still apply and that it would raise no questions on the revised report.

In accordance with the authority delegated to me in the letter from the President dated July 2, 1946, you are advised that there would be no objection to the submission of the report to the Congress. However, it would be appreciated if you would include a copy of this letter with your submission.

Sincerely yours,

(Signed) FRANK PACE, Jr.,
Assistant Director.

OFFICE OF THE SECRETARY,
Washington, March 24, 1948.

Hon. JOSEPH W. MARTIN, Jr.,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: In accordance with the requirements of section 9 (a) of the Reclamation Project Act of 1939, I submit herewith my report and findings on the Cachuma unit of the Santa Barbara County project, California. The Cachuma unit, consisting of Cachuma Reservoir, Tecolote transmountain diversion tunnel, and appurtenant works, is urgently needed to supply water for the irrigation of lands and for municipal use in the south coast area of Santa Barbara County. These works would alleviate to some extent the critical water shortage deriving from the current drought in California and would provide ample protection against future droughts for many years to come.

I find that the proposed construction has engineering feasibility; that the estimated cost of the proposed construction is \$32,310,000; that the part of the estimated cost which can properly be allocated to irrigation and probably be repaid by the water users is \$20,164,000; and that the part of the estimated cost which can properly be allocated to municipal water supply and probably be returned to the United States is \$12,146,000. The total of the foregoing repayable and returnable allocations equals the total estimated cost of construction.

Pursuant to the procedures contemplated in section 1 of the Flood Control Act of 1944 (58 Stat. 887), the report has been transmitted to the Governor of the State of California and to the Secretary of the Army. Their views and recommendations are incorporated in the enclosed documents.

The requirements of section 9 (a) of the Reclamation Project Act of 1939 and of section 1 of the Flood Control Act of 1944 having been met, I find that the Cachuma unit of the Santa Barbara County project is authorized for construction in accordance with the Federal reclamation laws.

In making these findings, I have taken into account the possibility of increased costs which may or may not eventuate. Any increase or decrease in costs will, of course, be reflected in extensions or reductions, as the case may be, of the period during which construction costs are returned by collections from irrigation, municipal and other water-supply users. If experience should indicate costs exceeding the estimates contained in this report, the water rates to be paid by the water users should remain the same as herein proposed until the actual cost is repaid. The proportion of total costs returned by the irrigation water users and the municipal and other water users, respectively, would remain approximately the same.

On March 4 this report was submitted to the President. The Director of the Bureau of the Budget has advised that the project is outstanding and appears to justify authorization, and that there would be no objection to the submission of this report to the Congress. His letter is attached.

Sincerely yours,

(Signed) J. A. KRUG,
Secretary of the Interior.

CANADIAN RIVER PROJECT

TEXAS

The Canadian River project was found feasible by the Secretary on January 13, 1950. A modification of the report was approved by the Secretary on May 3, 1950. The project was authorized by the act of December 29, 1950 (64 Stat. 1125).

BUREAU OF RECLAMATION,
Washington, D. C., December 15, 1949.

THE SECRETARY OF THE INTERIOR.

SIR: This is my proposed report on a plan for the development of the potential Canadian River project, Texas. My report is based upon and includes the attached report of the regional director at Amarillo, Texas.

The project consists of a dam and appurtenant works on the Canadian River at the Sanford site to regulate the streamflow for conservation and as required for the control of floods. The reservoir thus created would have a total capacity of 1,956,000 acre-feet. Water would be pumped from the reservoir and delivered by approximately 275 miles of pipeline to 11 municipalities in the project area. A total of 15 pumping plants would be required at various points along the pipeline. Effluent from the sewage treatment plants of two of the municipalities would be used to irrigate an ultimate total of over 20,000 acres. Also, the project would decrease the withdrawals from the limited ground-water supplies. The net effect would be to increase the amount of water available for irrigation in addition to the sewage effluent. In addition to municipal and industrial water supply and irrigation improvements, the project would provide flood-control protection to the Canadian River Valley in Texas and Oklahoma. Greatly needed facilities for water types of recreation and for fish and wildlife preservation and propagation would be provided. The project would also provide incidental benefits through the control and detention of sediment.

Investigations of this project have indicated clearly the need for

this development. The project cities now obtain their water supply by pumping from water-bearing strata which are inadequate for present demands. Water tables are dropping and the present rates of withdrawal cannot be sustained. The Canadian River is the only available permanent source of surface water supply that can be developed at a reasonable cost.

The regional director has estimated the cost of the project at \$85,383,000, including \$727,000 for recreational development of the reservoir area. Pending enactment of legislation which would establish a policy for the inclusion of recreation facilities in connection with multiple-purpose Federal reclamation projects, no expenditures for recreational facilities would be made nor would any nonreimbursable allocation of joint costs be made. However, the benefits which would accrue to recreation if the recreational facilities were to be constructed later would justify an allocation of \$1,454,000 to recreation.

Project costs of \$84,656,000 would be tentatively allocated as follows:

Flood control	\$3,030,000
Preservation and propagation of fish and wildlife.....	1,612,000
Municipal and industrial water supply.....	78,498,000
Irrigation	1,516,000
Total	84,656,000

Costs allocated to flood control and to the preservation and propagation of fish and wildlife would be nonreimbursable. Studies show that the costs allocated to irrigation could be repaid over a period of 40 years without interest and that those costs allocated to municipal and industrial water supply could be repaid to the United States over a period of 50 years with interest at 2 percent on the unpaid balance. Also, the project is economically justified as indicated by an over-all ratio of benefits to costs of 1.7 to 1.

Local interests have been advised of the repayment requirements of the reclamation laws including that of an appropriate interest charge on the portion of the cost allocated to municipal and industrial water supply. With an awareness of these requirements, these interests have indicated a willingness to repay the reimbursable portion of the project costs plus interest on that portion allocated to municipal and industrial water supply.

I concur in the recommendation of the regional director that the plan of development as described in this report be approved and the Canadian River project be authorized to be constructed, operated, and maintained by the Secretary of the Interior through the Bureau of Reclamation, substantially in accordance with the plans set forth in the attached report, except that construction of the recreational features and the allocation of costs to recreation on a nonreimbursable basis be deferred pending the establishment of a national policy covering recreational development at federally constructed reservoirs.

The regional director made no specific recommendation as to an interest charge on the portion of the cost allocated to municipal

and industrial water supply. However, in accordance with departmental policy that costs allocated to municipal and industrial water supply should be repaid with interests at a rate equal to the approximate cost of money to the Federal Government, I recommend that the costs of this project allocated to municipal and industrial water supply be repaid over a period of 50 years with interest at 2 percent on the unpaid balance.

I further recommend that you approve and adopt this as your proposed report and that you authorize me, in your behalf, to transmit this report and the accompanying papers including the regional director's report to the States of New Mexico, Oklahoma, and Texas, and to the Secretary of the Army, in accordance with the requirements of the Flood Control Act of 1944 (Stat. 887), and to the State of Texas for the views and recommendations of the head of the agencies exercising administration over the wildlife resources of that State in accordance with the provisions of the Act of August 14, 1946 (60 Stat. 1080). Upon fulfillment of the requirements of these acts, copies of the report, together with comments which are received will be submitted for your transmittal to the President and subsequently to the Congress.

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved and adopted January 13, 1950.

(Signed) OSCAR L. CHAPMAN,
Secretary of the Interior.

April 19, 1950.

THE SECRETARY OF THE INTERIOR.

SIR: Transmitted herewith is my report on the Canadian River Project in Texas.

In your behalf, copies of the report which you adopted as your proposed report on January 13, 1950, were transmitted to the States of New Mexico, Oklahoma, and Texas, and to the Secretary of the Army in accordance with the provisions of section 1 (c) of the Flood Control Act of 1944. In transmitting the report to the State of Texas, the Governor was requested to include such comments of the head of the agency exercising administration over the wildlife resources of the State as he desired in accordance with the provisions of the act of August 14, 1946 (60 Stat. 1080). Copies of the report were also sent to the Department of Agriculture, Department of Commerce, and the Federal Power Commission. Comments have been received in response to all of these transmittals and copies are attached.¹

¹ Attachments excluded from this publication.

The three States involved agree as to the need for the project. All three recognize the importance of an equitable allocation of the waters of the Canadian River among the States of New Mexico, Oklahoma, and Texas by means of an interstate compact and New Mexico and Oklahoma specifically condition their approval of the project on the successful negotiation of such a compact. Legislation granting the consent of the Congress to these States to negotiate such a compact is now pending. Authorization of the project should proceed now so that detailed plans for the project can be prepared during the interval while the compact is being formalized. It is not contemplated that construction would be undertaken until the amount of water to be available under the Compact is agreed upon.

The Chief of Engineers, speaking on behalf of the Department of the Army, agrees that the proposed allocation to flood control is justified on the basis of the anticipated benefits. He raises questions, however, concerning the alternative sources of water supply which were considered in computing the benefits of this project and the estimates of population growth used in computing water supply needs. While he agrees that the present ground water supplies would not be sufficient to support a large population or industrial growth, he suggests that initiation of the project in the near future would be predicated upon the conviction of local interests that the predicted increase in population growth and industrial development would be realized and that the inadequacy of present ground water sources is sufficiently serious to warrant the assumption by local interests of the recommended repayment.

Costs of municipal water to the cities involved have been increasing as new and diminishing ground water sources are tapped and the costs of developing additional water supplies for the principal cities now equals or exceeds the estimated costs of the water which will be made available from this project. The only alternative means by which the cities can secure an adequate water supply is through purchasing agricultural lands and the ground water rights which go with those lands. Such a procedure would not only adversely affect the agricultural and commercial economy of the area but it also would result in greatly increased water costs. Furthermore, if the indirect benefits which would accrue from construction of this project are considered, the benefits would exceed the costs by far more than the ratio of 1.7 to 1 shown in the report.

The estimated future needs of the cities have been computed by the municipalities themselves, and the cities involved have agreed to pay to the Government, with interest, all of the project costs allocated to municipal and industrial water supply. If the cities presently proposed to be included in the project are not able to use all the water made available by the project, there are other cities in the same general area which are desirous of purchasing water from this project.

The Chairman of the Federal Power Commission concludes that there are possibilities for power development in connection with the proposed project and that these potentialities should be given

consideration in further planning for the project. Such consideration will be given and if the development of power is justified, a supplemental report will be submitted for authorization of the power plant. The present report does not recommend authorization of any power generating facilities at this time.

Subsequent to your approval of the report on January 13, 1950, the Fish and Wildlife Service has continued studies of the relationship of the proposed project to the preservation and propagation of fish and wildlife in order to firm up the preliminary evaluation of fish and wildlife benefits included in the proposed report. These studies indicate that if a minimum pool area of not less than 10,000 acres is maintained in the Sanford Reservoir, and lands and waters are made available for wildlife management purposes under jurisdiction of Federal and State conservation agencies, the net average annual benefits to fish and wildlife will be \$93,800. This would justify a somewhat larger allocation to fish and wildlife than the estimate of \$70,000 annually upon which the proposed report was based. As the amount of fish and wildlife benefits to be obtained will be dependent to some extent upon the division of water which will be made if and when a Canadian River Compact is negotiated, no change in the allocation of \$1,612,000 of the cost of the project to fish and wildlife is recommended, and my recommendation below that a minimum pool area of 10,000 acres be maintained must be taken as contingent upon the availability of water supply under such a compact.

After consideration of all these comments received, I have no further revision of your proposed report to suggest.

I recommend, therefore, that you adopt the report which you approved on January 13, modified as above suggested with respect to a minimum pool of 10,000 acres with adjacent lands to be made available for the purpose of preservation and propagation of fish and wildlife, under administrative control of Federal and State wildlife conservation agencies, as your final report, and that you transmit it, together with copies of the attached comments, to the President and subsequently to the Congress for appropriate action in accordance with the Federal Reclamation laws.

Sincerely yours,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved: May 3, 1950.

(Signed) OSCAR L. CHAPMAN,
Secretary of the Interior.

AUTHORIZATION OF CANADIAN RIVER PROJECT

An act to authorize the construction, operation, and maintenance by the Secretary of the Interior of the Canadian River reclamation project, Texas. (Act of December 29, 1950, 64 Stat. 1125, Public Law 898, 81st Cong., 2d sess.)

* * * That, for the purposes of irrigating land, delivering water for industrial and municipal use, controlling floods, providing recreation and fish and wildlife benefits, and controlling and catching silt, the Secretary of the Interior, acting pursuant to the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto), is authorized to construct, operate, and maintain the Canadian River reclamation project, Texas, described in the report of the Commissioner of Reclamation approved by the Secretary May 3, 1950, entitled "Plan for Development, Canadian River Project, Texas", Project Planning Report Number 5—12.22—1, at an estimated cost of \$86,656,000, the impounding works whereof shall be located at a suitable site on the Canadian River in that area known as the Panhandle of Texas. In addition to the impounding works, the project shall include such main canals, pumping plants, distribution and drainage systems, and other works as are necessary to accomplish the purposes of this Act. The use by the project of waters arising in Ute and Pajarito Creeks, New Mexico, shall be only such use as does not conflict with use, present or potential, of such waters for beneficial consumptive purposes in New Mexico.

SEC. 2. (a) Notwithstanding any recommendations in the above-mentioned report to the contrary, only the costs of construction allocable to flood control and, upon approval by the President of a suitable plan thereof, to the preservation and propagation of fish and wildlife, and operation and maintenance costs allocable to the same purposes, shall be nonreimbursable.

(b) Actual construction of the project herein authorized shall not be commenced, and no construction contract awarded therefor, until (1) the Congress shall have consented to the interstate compact between the States of New Mexico, Oklahoma, and Texas agreed upon by the Canadian River Compact Commission at Santa Fe, New Mexico, December 6, 1950, in conformity with Public Law 491, Eighty-first Congress, and (2) repayment of that portion of the actual cost of constructing the project which is allocated to municipal and industrial water supply and of interest on the unamortized balance thereof at a rate (which rate shall be certified by the Secretary of the Treasury) equal to the average rate paid by the United States on its long-term loans outstanding at the time the repayment contract is negotiated minus the amount of such net revenues as may be derived from temporary water supply contracts or from other sources prior to the close of the

repayment period, shall have been assured by a contract satisfactory to the Secretary, with one central repayment contract organization, the term of which shall not exceed fifty years from the date of completion of the municipal and industrial water supply features of the project as determined by the Secretary.

(c) The repayment contract shall provide, among other things, (1) that the holder thereof shall have a first right, to which right the rights of the holders of any other type of contract shall be subordinate, to a stated share or quantity of the project's available water supply for use by its constituent industrial and municipal water users during the repayment period and a permanent right to such share or quantity thereafter subject to payment of such costs as may be incurred by the United States in its operation and maintenance of any part of the project works; (2) that, subject to such rules and regulations as the Secretary may prescribe, the care, operation, and maintenance of such portions of the pipeline and related facilities as are used solely for delivering such water to the contract holder and its constituent organizations shall, as soon as is practicable after completion of the municipal and industrial water supply features of the project, pass to the contract holder or to an organization which is designated by it for that purpose and which is satisfactory to the Secretary; and (3) that title to such portions of the pipeline and related facilities shall in like manner pass to the contract holder or its designee or designees upon payment to the United States of all obligations arising under this Act or incurred in connection with the project.

SEC. 3. There are hereby authorized to be appropriated, out of any moneys in the Treasury not otherwise appropriated, such sums as may be required to carry out the purposes of this Act.

CARLSBAD PROJECT

NEW MEXICO

The Carlsbad project was authorized by the Secretary on November 28, 1905, under the Reclamation Act of 1902 (32 Stat. 388) ; examined and reported upon by the Board of Army Engineers pursuant to section 1 of the Act of June 25, 1910 (36 Stat. 835), and approved by the President January 5, 1911.

Alamogordo Dam, for the purpose of augmenting the water supply for the Carlsbad project, was found feasible by the Secretary on November 1, 1935, and approved by the President on November 6, 1935, pursuant to section 4 of the act of June 25, 1910 (36 Stat. 836), and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702). The Flood Control Act of August 11, 1939 (53 Stat. 1414, 1417), states that the Alamogordo Dam and Reservoir is to be used for irrigation first, for flood control and river regulation second, and third for other purposes.

Funds were provided, without an additional finding of feasibility, for enlargement of the spillway of Alamogordo Dam by the Interior Department Appropriation Act, 1955 (Act of July 1, 1954, 68 Stat. 361, Public Law 465, 83d Cong., 2d sess.)

UNITED STATES GEOLOGICAL SURVEY,
RECLAMATION SERVICE,
Carlsbad, N. Mex., August 31, 1905.

CHIEF ENGINEER,
U. S. Reclamation Service, Washington, D. C.

SIR: The board of engineers designated to consider the Carlsbad Project, New Mexico, submits the following report:

During October, 1904, a flood in the Pecos River destroyed a large portion of Avalon dam upon which the diversion for the Pecos Irrigation Company's canal system depends.

During the winter of that year and the spring of this year efforts were made to construct a temporary diversion dam and

flume in order that water might be furnished for irrigation during the present season.

The money for this purpose was furnished by the company and the work was performed under the supervision of the engineers of the Reclamation Service engaged in investigating the project.

The flood conditions of the Pecos River during this construction were such that the proposed work was destroyed and it became impossible to furnish any water for irrigation.

Fortunately, there were unusual rains during the irrigation season so that some crops were raised and the orchards were only partially killed, but the district as a whole is on the verge of ruin. About 15,000 acres heretofore irrigated, upon which there is dependent a population of some 3,000 people and property to the value of about two million dollars will return to desert conditions unless some action can be taken to provide a reliable irrigation system, and the loss of the agricultural improvements already made will be complete unless some water can be furnished during the irrigation season of 1906.

The present condition of the irrigation system of the Pecos Irrigation Company is as follows:

The McMillan reservoir which has served to supply the small amount of storage rendering possible the irrigation of 15,000 acres is underlaid by gypsum beds. This gypsum dissolved by the action of the stored waters has caused a large number of sink holes through which considerable quantities of water have been lost. The investigations indicate that a considerable percentage of this leakage is not recovered for use in the system. These leakage conditions have become worse in the last few months. Consequently this reservoir can not be relied upon for permanent storage so far as the conditions are now understood. It may, however, serve for temporary or auxiliary storage. Considerable work is required to replace the gates and spillway in serviceable condition.

The Avalon reservoir is used for diversion into canal system and furnishes an inconsiderable amount of storage. The dam is destroyed for a space of 450 feet at the river channel. This must be replaced and the entire structure including the remaining 1,000 feet of embankment must be made impervious by a concrete and metal core. Extensive repairs and reconstruction are required at the headworks of the canal.

The piers of the concrete aqueduct carrying the west side canal across the Pecos River have settled and considerable expenditure will be required to make it serviceable. Unless this work is immediately performed the aqueduct is liable to be destroyed by the flood waters.

The canal system passes through gypsum beds in numerous places causing great waste of water, more than one-half the amounts turned into it being lost. Considerable sums must be expended to reduce this loss to a reasonable percentage and much excavation will be needed to clean out the canals and restore them to the necessary carrying capacity, besides which there are a number of repairs to be made.

A study of the soil conditions shows that by using Lake McMillan for storage to the extent which it has heretofore supplied, putting the canals in proper condition, reducing the loss and avoiding waste in the use of water in irrigation an area of 20,000 acres of first and second class land can be furnished with water, including the areas heretofore cultivated.

Upon making an estimate of the expense of reconstruction it became evident that the possibility of taking up the project under the Reclamation Act depended upon the price for which the plant of the Pecos Irrigation Co. could be purchased by the United States.

The par value of the Company's stock is \$450,000, bonds outstanding \$355,000, on which the interest for 18 months is due. The following statement was made by the company as to obligations which must be paid in full.

Prior lien bonds at 6 percent.....	\$50,000
6 percent interest for 18 months.....	4,500
Bonds non-consenting to prior lien or to any trade.....	25,000
Money expended winter of 1904-1905 for flood repairs.....	36,500
Expenses legal, etc., estimated	10,000
Work yet to be done, estimated	10,000
Contingent	4,000
	<hr/>
	140,000

In addition to this, bonds to the amount of \$280,000 with an addition of 5 percent accrued interest for 18 months must be retired.

Three conferences were had with the company's representatives. The first offer made was \$350,000, finally it was stated by Mr. Francis G. Tracy, President and General Manager, that he felt unable to assure the board that a price of less than \$250,000 would be accepted by the bond holders.

The necessary reconstruction and repairs for the irrigation of 20,000 acres depending upon the storage to be had from Lake McMillan may be placed at \$450,000 as a safe estimate.

A careful consideration of the agricultural conditions brings the board to the conclusion that a charge of \$30 per acre without maintenance is all that should be placed upon the land.

Upon this basis it appears to the board that the extreme price which can be paid for the entire irrigation plant and property of the Pecos Irrigation Co. including right of way, reservoir sites, claims to water, existing canals, laterals, structures, buildings, etc., excluding only the irrigable lands owned by the company and the canal known as the Hagerman Land and Improvement Company's canal on the east side of the river heading in sec. 11 T. 23 S., R. 28 E., is \$150,000. It will be necessary also for the company to sign the usual contracts providing for the disposition of its lands in tracts not exceeding 160 acres so that the same may become subject to the provisions of the Reclamation Act.

This sum is regarded as the present value of the plant, although the expense of construction has been much greater.

The full development of this project would provide for the irrigation of 40,000 acres of first and second class land, involving the use of what is known as Reservoir No. 3 with a capacity of 65,000 acre-feet.

The right of way for Reservoir No. 3 was approved by the Secretary of the Interior under the act of March 3, 1891 in favor of the Pecos Irrigation and Improvement Co., a predecessor of the Pecos Irrigation Co.

The public lands upon which this site is located were withdrawn some two years ago under the first form of withdrawal under the Reclamation Act.

An estimate of the cost of constructing the storage works for the utilization of this reservoir and the proper extension and enlargement of the canal system for irrigating 40,000 acres, may be safely placed at \$600,000 in addition to the estimated cost for 20,000 acres.

The estimated cost for 40,000 acres would therefore be \$1,050,000. Adding the amount deemed proper for the purchase of the existing irrigation plant makes the total cost for the larger acreage \$1,200,000. This makes a cost per acre of \$30, without maintenance which we regard as the largest charge to be properly made against this land.

The advisability of using Reservoir No. 3 depends upon the results shown by further examination of the site, to determine whether gypsum beds exist such as to prevent its use for storage. It is believed that the necessary borings can be completed by November 1, 1905.

Assuming that this reservoir site can be used, and also that the existing irrigation plant can be acquired at the price stated, it will be necessary that the entire acreage of irrigable land under the project must be signed up under the provisions of the articles of incorporation of the Water Users Association and that the holdings in excess of 160 acres shall be included in the usual contracts to insure subdivision by the time water is ready to be furnished therefor. We have conferred with the officers of the Water Users Association and have laid the situation fully before them. They are prepared to take any action deemed necessary by the Reclamation Service for the success of the project.

We therefore recommend:

1. That the necessary borings at the site of the Avalon Dam and of Reservoir No. 3 be completed at the earliest possible date.
2. That the Pecos Irrigation Co. be asked to inform the Reclamation Service before September 30, 1905, whether it will transfer its entire irrigation plant to the United States for the sum of \$150,000 as herein stated.
3. That if the company agrees to a sale at such a sum, the 20,000 acre project herein outlined be at once taken up so that water may be furnished for irrigation at the earliest possible date.
4. That if Reservoir No. 3 shall be found suitable for storage the 40,000 acre project be taken up for construction.

5. That if the Pecos Irrigation Company refuses to make a sale at the sum mentioned all work on the project shall cease.

Very respectfully,

(Signed) W. H. SANDERS,
Consulting Engineer.
GEO. Y. WISNER,
Consulting Engineer.
MORRIS BIEN,
Supervising Engineer.
B. M. HALL,
Supervising Engineer.
W. M. REED,
District Engineer.

OFFICE OF THE SECRETARY,
Washington, November 23, 1905.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: On October 19, 1905, you submitted to this Department a copy of a report of the Board of Engineers dated August 31, 1905, regarding the Carlsbad Project, New Mexico, resolutions signed by Henry F. Christian, Secretary of the Pecos Irrigation Company dated September 30, 1905, and a letter from F. H. Newell, Chief Engineer, dated October 14, 1905. The closing paragraph of your said letter commended to my favorable consideration this project, which was the subject of the above enumerated papers.

The Department construed the language used in your said letter of the 19th ultimo as tantamount to a concurrence in the recommendations of the Board of Engineers and the Chief Engineer of the Reclamation Service which were, first, that necessary borings be completed at the earliest possible date; second, that the Pecos Irrigation Company be asked whether it will sell its property for the sum of \$150,000 (the company by offer of September 30, is willing to accept \$150,000); third, that following this agreement the 20,000 acre project be taken up at once at an expenditure of approximately \$30 per acre, or \$300,000; fourth, that the larger project, involving 40,000 be taken up if suitable storage can be found.

In your letter of October 9 on this same subject, after discussing the condition of the Reclamation Fund and the estimated balance that would be found therein on July 1, 1908, you stated:

The consideration of the Carlsbad project may be made from either one of two standpoints, first, apportionment by states; second, apportionment by merit. If apportionment by State or Territorial lines is alone considered, then it will not be possible to take up this project. If, however, apportionment by merit is to govern, then there is no doubt that this project is among the most

meritorious under consideration and should be preferred as against projects in Montana, North Dakota or Oklahoma.

In your letter of November 14, you embodied a message received from Mr. A. P. Davis, Assistant Chief Engineer then at Carlsbad, N. Mex., in which he stated:

McMillan reservoir leaks are worse than last year and menace the dam. Storage capacity is so precarious that it is unwise to irrigate new land. There is no reason why the Government should touch this project except to save improvements already here. Developments on reservoir three unfavorable. The proper repair and difficult maintenance of the project will cost all the land will stand without any payment for present system. The estimates sent in did not include maintenance which will be very heavy.

You also quoted a message addressed to Mr. Davis at Snyder, Okla., on the same subject, as follows:

Wire whether Carlsbad Project can be put in shape to deliver water to irrigated lands next spring if approved now, reasonable time being allowed for advertising and execution of contract.

and his reply thereto as follows:

No, but if done by force account and vigorously pushed water can be delivered in time to save trees and alfalfa, barring unexpected floods.

You concluded your letter with the statement that the above was submitted for my consideration in connection with data and reports previously furnished the Department on the same subject.

In your letter of November 15, 1905, in reference to this same project, you referred to previous correspondence on the subject and to the recommendation made by you in your letter of November 9, as to the manner in which the estimated balance of the Reclamation Fund should be apportioned, and stated that

In view of your letter of November 8, I can not with propriety oppose the presenting of these projects to you, but I must still adhere to my original recommendation that this estimated balance be apportioned as originally planned.

I am now in receipt of your letter of the 20th instant in which you conclude as follows:

I have already discussed the financial situation in my letter of November 16 which refers to my letter of November 9, and also to my letter of October 19, in which I have commended the project to your favorable consideration, in connection with the final determination of policy as regards investment of the estimated balance of the Reclamation Fund.

and you also stated in the opening paragraph of your letter that:

Referring to the Carlsbad project, the Board which recently met to consider this project reports that, in general, the situation has not changed since the time of the report of the board dated August 31, 1905, and transmitted to you by my letter of October 19.

In view of the above and foregoing, the Department is somewhat confused as to the attitude of the Reclamation Service in regard to this project, and in order that there may be no misunderstanding, I request that you advise me at once specifically on the following propositions.

First: Do you or do you not recommend action concerning this project as recommended by the Board of Engineers in its report dated August 31, 1905?

Second: If any good and sufficient reasons exist why this project should not be constructed or proceedings had in accordance with the said recommendations of the Board of Engineers, what are they?

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

UNITED STATES GEOLOGICAL SURVEY,
Washington, November 27, 1905.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: I have the honor to acknowledge receipt of your letter of November 23, 1905, in relation to the Carlsbad Project, New Mexico. After quoting paragraphs from previous letters you ask:

1st: Do you or do you not recommend action concerning this project as recommended by the Board of Engineers in its report dated August 31, 1905?

2nd: If any good and sufficient reasons exist why this project should not be constructed or proceedings had in accordance with the said recommendations of the Board of Engineers, what are they?

If this project came up *de novo*, and there was not any settlements on the Pecos River I would not recommend it to you for consideration at the present time. This would be based upon the fact that there are other projects which present less difficulties from an engineering point of view that should be first considered. From the standpoint of the engineers it is practicable, with ample funds and with freedom to expend these, to rush the work with fair chances of success. None of the experienced engineers are at all eager to take these chances. Their reports, as indicated by the material transmitted to you, are by no means enthusiastic; but there is, as above stated, a fair chance—say three chances out of four—of pushing this work to success from the engineering standpoint.

From the legal or administrative side there may be reasons to be urged against it, such, for example, as the difficulty of securing immediate title to the property involved under prevailing practices. The papers to be examined are complicated,

and the recent decisions pertaining to similar transfers are such as to raise doubts as to whether complete title can be conveyed in the near future. If, however, it is possible to waive the question of title to the property involved, and authorize the engineers to at once take possession of this property for the United States and begin construction before the transfers are completed, then it may be practicable to bring the work to a stage of completion sufficient to save the valuable orchards.

Every day's delay, of course, largely increases the jeopardy, and the conditions discussed on August 31 by the engineers as regards prompt construction are being gradually changed by the delays involved. If immediate instructions are issued by wire to the engineers on the ground to take possession of the property and begin work by force account, and as an extraordinary emergency to disregard the 8-hour law, as permitted in Section 3738, U. S. Rev. Stat., it may be reasonable to expect that they may carry on the work successfully, if Nature does not intervene with extraordinary floods.

This leaves the matter largely a question of policy to be decided by you, as to whether the Carlsbad Project should be entered upon at the present time, in view of the condition of the settlers tributary to it, and the state of the Reclamation Fund.

Yours respectfully,

(Signed) CHAS. D. WALCOTT,
Director.

OFFICE OF THE SECRETARY,
Washington, November 28, 1905.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: The Board of Engineers designated to consider the Carlsbad project, New Mexico, submitted a report on August 31, 1905, which was approved by the Chief Engineer on October 14, 1905. On October 19, 1905, you submitted said report and the Chief Engineer's letter of approval thereof to the Department with the statement that "this project is one which has been taken up for examination at the earnest request of citizens of New Mexico and I respectfully commend it to your favorable consideration." The emphasis is mine.

The recommendations submitted by said Board of Engineers are as follows:

1. That the necessary borings at the site of the Avalon dam and of Reservoir No. 3 be completed at the earliest possible date.
2. That the Pecos Irrigation Company be asked to inform the Reclamation Service before September 30, 1905, whether it will transfer its entire irrigation plant to the United States for the sum of \$150,000 as herein stated.
3. That if the company agrees to a sale at such a sum, the 20,000 acre project herein outlined be at once taken up so that water may be furnished for irrigation at the earliest possible date.

4. That if Reservoir No. 3 shall be found suitable for storage the 40,000 acre project be taken up for construction.
5. That if the Pecos Irrigation Company refuses to make a sale at the sum mentioned all work on the project shall cease.

The Pecos Irrigation Company has agreed to sell to the United States for \$150,000 its entire irrigating plant, including right of way, reservoir sites, claims to water, existing canals, laterals, structures, buildings, etc. It must also sign the usual contracts providing for the disposition of its lands in tracts not exceeding 160 acres so that the same may become subject to the provisions of the Reclamation Act. It is the opinion of the Board of Engineers that if these things can be consummated water can be furnished at an early date to 20,000 acres. It is estimated that the repairs necessary to render the system available for the irrigation of that area will require an expenditure of \$450,000, making the entire cost \$600,000 or \$30.00 per acre without maintenance, which the engineers say is all the land will stand. Just how the Government is to be reimbursed for the cost of maintenance does not appear. This is an important item and some arrangement must be made concerning it, as provision must be made for the return to the Reclamation Fund of every dollar expended therefrom on this or any other project.

Information was transmitted here by you on the 14th instant from one of the engineers of the Reclamation Service who examined the project to the effect that the cost of repairs and maintenance will of itself cost all the land will stand without paying anything for the present system. Neither yourself nor the Chief Engineer, however, as the result of that information, suggested any departure from the course recommended by the Board of Engineers in its report of August 31, *supra*. Indeed, in your letter of the 20th instant you report that "the board which recently met to consider this project reports that, in general, the situation has not changed since the time of the report of the board, dated August 31, 1905, and transmitted to you by my letter of October 19." I conclude, therefore, that the report and recommendation of the Board of Engineers of August 31, 1905, approved by the Chief Engineer and commended by you, still presents the proper view of the situation.

While fully aware of the need of expedition in this matter if the results desired are to be obtained, it is not possible, as suggested in your letter of the 27th instant—

to waive the question of title to the property involved and authorize the engineers to at once take possession of this property for the United States and begin construction before the transfers are completed.

Nor is it possible to at this time issue instructions by wire—

to the engineers on the ground to take possession of the property and begin work by force account, etc.

nor does it seem that such a course is necessary.

In a letter received from H. J. Hagerman, dated October 29, 1905, and referred to you on November 7 for report, the statement is made that Mr. Hall, who is the Supervising Engineer for New Mexico, had stated that if work can be started on or before January 1st next—

enough can be accomplished on the project to enable them to put water for the irrigation of 12,000 acres in the canal by May 1, 1906.

This has not been controverted by anything in the record although it is fully understood that an earlier beginning, if possible, is desirable.

It is also stated in Mr. Hagerman's letter that all of the 20,000 acres which it is proposed to irrigate at first, together with nine thousand acres in addition, have come in under the water users contracts prescribed by the Reclamation Service. It is also alleged in Mr. Hagerman's letter that—

the company is now (October 29, 1905) completing the abstracts of its property under instructions of Mr. Newell, preparatory to submitting them for the approval of the Government.

It is assumed therefore that the water users association has pledged a sufficient acreage to insure the return to the Reclamation Fund of the cost of the project, and that the Pecos Irrigation Company has completed the abstracts of its property.

After careful consideration of the entire matter as disclosed by the correspondence and the conference had with a committee of citizens from New Mexico, at which you were present and in the results of which you concurred, I have reached the following conclusions:

That subject to the conditions hereinafter named the report and recommendations of the Board of Engineers dated August 31, 1905, are hereby concurred in and approved and the sum of \$600,000 is hereby set aside and appropriated from the Reclamation Fund for the irrigation of the first 20,000 acres as recommended in said report. The conditions are as follows:

1. That some arrangement be made to secure to the Reclamation Fund the return of the cost of maintenance and operation of said system, stating the sum estimated, in addition to the cost of purchase and repairs thereof detailed in said Engineers' report.

2. That the acreage pledged by the water users association, and the manner, form and execution of the contracts covering the same are sufficient to protect the United States and guarantee the return to the Reclamation Fund of the sum appropriated and expended therefrom for the purpose herein above stated.

3. That an agreement to purchase the property of the Pecos Irrigation Company be entered into with said Company, as is usual in such cases and submitted here for the approval of the Secretary of the Interior with your recommendations in the premises: that said agreement shall be in the usual form and shall contain a specific and detailed statement of the various

items of property which said company proposes to transfer to the United States, free from any charge, lien or encumbrance of any kind or character whatever. Said agreement shall also contain the usual provision that it is based on the condition that said company will furnish an abstract showing good and sufficient title to said property, and will convey the same to the United States by good and sufficient warranty deed.

4. That said Pecos Irrigation Company sign the usual contracts providing for the disposition of its lands in tracts not exceeding 160 acres, so that the same may become subject to the provisions of the Reclamation Act.

It would tend to expedite matters if said Company would, along with the other papers enumerated, transmit a deed to said property duly executed.

You will at once make this matter special. Use the wires freely. As soon as they are received you will forward the papers to the Department. They will be made special here and if found satisfactory you will at once be notified thereof and on receipt of said notice you will at once notify the engineers to take possession of the property and begin work by force account.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

January 10, 1906.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: I am in receipt of a telegram from F. H. Newell, Chief Engineer Reclamation Service, from which I quote the following:

CARLSBAD, N. MEX., *January 9.*

Conference Sanders Hall and Reed on Carlsbad situation. Unusual snow, floods threaten. In view probable delays by floods and legal details we advise modification Secretary letter November 28 to authorize letting contracts on Avalon Dam and similar works. Also urge immediate authority for purchasing material especially steel and beginning force account work on repairs where delays threaten disaster. Abstract mailed today.

It appears that the local conditions threaten disaster unless work can be begun immediately.

The abstract of title referred to is that of the Pecos Irrigation Company, the purchase of its irrigation system being now under consideration by the Department.

In view of my letter of December 20, showing the necessity for emergency work and the need of working more than eight hours per day; and in view of my letter of December 27, indicating that the United States would not be subject to any risk in entering

upon the property of the Pecos Irrigation Company, and also of the discussion in my letter of even date concerning the requirement of the Department of a bond from the Water Users' Association before approving its contract, I recommend that immediate authority be given for beginning the necessary work on force account as an extraordinary emergency, and also for the purchase of the necessary material.

Very respectfully,

(Signed) CHAS. D. WALCOTT,
Director.

OFFICE OF THE SECRETARY,
Washington, January 10, 1906.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: Referring to your letter of even date herewith, embodying a telegram from Mr. Newell, Chief Engineer of the Reclamation Service, in regard to the conditions relative to the Carlsbad, New Mexico, project, in which you recommend for reasons stated that immediate authority be given for beginning the necessary work on force account as an extraordinary emergency, and also for the purchase of the necessary material, you are advised as follows:

In Departmental letter of November 28, approving this project and making appropriation from the Reclamation Fund for its construction, it was specifically stated that the question of title to the property of the Pecos Irrigation Company could not be waived. In an opinion of the Assistant Attorney General, which I approved on the 6th instant, it was suggested that if it was necessary to begin the construction of this work before the abstracts of title could be passed upon that the Pecos Irrigation Company execute a bond to indemnify the United States for any loss or liability occasioned by any defect of such title. By letter of even date herewith I have advised you of the character of the indemnifying bond required of the Pecos Irrigation Company.

In view of these facts, the Department does not feel that it would be justified in authorizing the beginning of work prior to the approval of the abstracts of title or the execution by the Pecos Irrigation Company of the indemnifying bond suggested.

In this connection I desire to say that the Department has done everything it could to expedite this matter without jeopardizing the interests of the Government, and it disavows all responsibility whatever for any delays that may have occurred in initiating work on this project.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

ALAMOGORDO DAM

OFFICE OF THE SECRETARY,
Washington, November 1, 1935.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The Supreme Court of the United States in the Parker Dam decision (United States v. State of Arizona, 295 U. S. 174) indicated that Section 4 of the Act of June 25, 1910, 36 Stat., 835, is applicable to irrigation projects constructed under the National Industrial Recovery Act, and this report upon the Carlsbad storage project is made to you under said statute of 1910 and under Subsection B of Section 4 of the Act of December 5, 1924, 43 Stat., 701.

Section 4 of the Act of June 25, 1910, provides, in effect that after the date of that act no irrigation project to be constructed under the Act of June 17, 1902, 32 Stat., 388, and acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924, 43 Stat., 701, provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

Under date of August 14, 1935, an allotment of \$1,000,000 was approved for the construction of upstream storage on the Pecos River in New Mexico, which is now available. The water to be impounded in the proposed reservoir will be used on some 25,000 acres of land near Carlsbad, New Mexico, embraced in the Carlsbad Irrigation District which is preparing to enter into a contract with the United States to repay the cost of the work over a term of forty years, without interest.

The project was authorized in 1905 and construction began in 1906. The water supply is obtained from the Pecos River, with storage in the McMillan Reservoir of 39,000 acre feet capacity and the Avalon Reservoir of 6,000 acre feet capacity. The project has an irrigable acreage of 25,055 acres included in the Carlsbad

Irrigation District with which the Government has a contract for repayment of the construction cost dated November 14, 1932. Over 90 per cent of the project construction and operation and maintenance charges due to date has been paid.

There is need of additional storage to provide a supplemental water supply upon the lands in this district as for many years the water users have been confronted with threatened losses because of an inadequate supply.

The proposed Alamogordo storage reservoir on the Pecos River will augment the stored supply for the lands in that district, which are solely dependent upon Pecos River water.

It is also proposed to line with concrete certain existing canals or parts of canals on the Carlsbad project. The concrete lining of such canals will serve to decrease seepage losses and will tend to conserve the water supply.

Studies which have been made by the Bureau of Reclamation indicate that the water supply is adequate for the proposed reservoir; that the construction of the proposed dam is feasible from an engineering standpoint; and that the dam can be built and the proposed lining of canals can be accomplished within the cost of \$2,500,000, which the Carlsbad Irrigation District is to agree to pay, so far as expended by the United States.

In an established irrigation community such as this, there is little danger of an inflationary movement in land prices, resulting in sales to outsiders at rising prices, so that the new buyers would be unable to pay for their land and meet the construction charges.

It is contemplated that the improved water supply which would be afforded by the proposed Alamogordo storage reservoir will be utilized only as a supplementary supply for the 25,055 acres of irrigable area of the existing Carlsbad project.

I find that the project is feasible, that the land watered thereby is adaptable for actual settlement and farm homes, and that the landowners benefited by the project will be able from the agricultural produce of the lands irrigated by the reservoir to return the cost of the development to the United States.

I recommend that the project be approved and that necessary authority be issued to this Department to make contracts for the construction of the project and to proceed with the work.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved November 6, 1935.

(Signed) FRANKLIN D. ROOSEVELT,
President.

[Extract from] An act amending previous flood-control acts and authorizing certain preliminary examinations and surveys for flood control, and for other purposes. (Act of August 11, 1939, 53 Stat. 1414, 1417, Public Law 396, 76th Cong., 1st sess.)

* * * * *

SEC. 7. That the Alamogordo Dam and Reservoir on the Pecos River, New Mexico, is hereby authorized and declared to be for the purposes of controlling floods, regulating the flow of the Pecos River, providing for storage and for delivery of stored waters, for the reclamation of lands, and other beneficial uses, and said dam and reservoir shall be used, first, for irrigation; second, for flood control and river regulation; and third, for other purposes. The Chief of Engineers and the Secretary of War are directed to report to the Congress the amount of the total cost of said Alamogordo Dam and Reservoir which is properly allocable to flood control. The appropriation and transfer of such amount from the general fund of the Treasury to the Reclamation Fund, for credit by reduction of the maximum obligation of the Carlsbad Irrigation District to repay the total cost thereof, is hereby authorized.

SPILLWAY ENLARGEMENT

[Extract from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1955, and for other purposes. (Act of July 1, 1954, 68 Stat. 361, 365, Public Law 465, 83d Cong., 2d sess.)

* * * * *

For construction and rehabilitation of authorized reclamation projects or parts thereof (including power transmission facilities) and for other related activities, as authorized by law, including payments under the Act of August 15, 1953 (67 Stat. 592), to remain available until expended, * * * *Provided further,* That sums made available for increasing spillway capacity at Alamogordo Dam, Carlsbad project, New Mexico, for the purpose of removing the existing flood hazard, be nonreimbursable and non-returnable: * * *

RED BLUFF PROJECT

The Red Bluff project, south of Carlsbad project, was authorized by the act of June 18, 1926 (44 Stat. 753). No construction was undertaken.

An act to provide for the storage of the waters of the Pecos River. (Act of June 18, 1926, 44 Stat. 753, Public Law 404, 69th Cong., 1st sess.)

SEC. 1. That in accordance with the provisions of the act of June 17, 1902 (Thirty-second Statutes at Large, p. 388), and acts amendatory thereof or supplementary thereto, except as the same are modified herein, the Secretary of the Interior is hereby authorized and empowered to construct the Red Bluff Federal irrigation project, consisting of a reservoir upon the Pecos River, sufficient in size for the irrigation of not exceeding forty thousand acres of land in the State of Texas, which reservoir shall be located at a point where it will impound the flood waters of Delaware Creek and Black River, and shall be provided with all necessary incidental works for the operation of the same.

SEC. 2. That no expenditure for construction shall be made under this act until an appropriate contract or contracts in form approved by the Secretary of the Interior, providing for the payment to the United States as provided herein of the costs incurred on account of said project, shall have been properly executed by a district or districts organized under State law and embracing property to be benefited by said project, and such execution shall have been confirmed by a court of competent jurisdiction: *Provided*, That expenditures may be made hereunder at any time to cover necessary expenses incurred by the United States on account of preliminary investigations and negotiations in connection with the execution of the contract or contracts provided for by this section.

SEC. 3. That the total cost to the United States of the construction of said project shall be repaid to the United States in twenty annual installments, without interest, as follows: Five per centum thereof on March 1 of the second year following the year in which water becomes first available from said reservoir for irrigation, and 5 per centum thereof annually thereafter until the whole amount is paid: *Provided*, That if any installment shall not be paid when due there shall be added at once to such installment a penalty of 1 per centum thereof and thereafter on the first day of each month a like penalty so long as the default continues.

SEC. 4. That the cost to the United States of operating and

maintaining said project shall be paid to the United States in advance upon annual estimates made by the Secretary of the Interior, and upon a day to be fixed by him: *Provided*, That the cost of operating and maintaining the project the year water is first available therefrom for irrigation, shall be merged with and made a part of the construction cost. If the estimate for any one year shall be either more or less than the actual cost, an appropriate adjustment shall be made in the estimate for the next succeeding year.

SEC. 5. That no classification by the Secretary of the Interior of the irrigable lands of said project shall be required, nor shall he issue any public notice relating to construction charges against said lands: *Provided*, That the Secretary of the Interior shall determine the cost of said project, including the cost of operating and maintaining it the first season water is available therefrom for irrigation, and shall furnish a statement of such cost to the contracting district or districts.

SEC. 6. That there is hereby authorized to be appropriated from any moneys not otherwise appropriated, in the Reclamation Fund such an aggregate amount as may be necessary to carry out the purposes of this act, not exceeding the sum of \$2,000,000.

SEC. 7. In the event that any irrigation works are constructed under the authorization contained in this act, neither the United States, the State of Texas, nor any of the parties for whose benefit said works are to be constructed shall at any time hereafter have or claim, or attempt in any manner to acquire, any right to the use in the State of Texas of any water which shall flow in the Pecos River, or any of its tributaries, in New Mexico at or above the Avalon Dam, except such of said water as may not at any time be used or diverted from or above said dam: *Provided*, That nothing in this section shall be construed to curtail the quantity of water to which present users in Texas may now be lawfully entitled: *And provided further*, That no construction under this act shall begin until the State of Texas, through legislative act, signed and approved by the governor of said State, shall have agreed to the provisions of this section.

CENTRAL VALLEY PROJECT

CALIFORNIA

The Central Valley project was found feasible by the Secretary on November 26, 1935, under the provisions of section 4 of the act of June 25, 1910 (36 Stat. 836), and subsection B of section 4 of the act on December 5, 1924 (43 Stat. 702), and approved by the President on December 2, 1935. The project was authorized by the Rivers and Harbors Acts of 1937 and 1940, and the following acts concerning additional development:

The Folsom unit and Sly Park unit of the American River division of the Central Valley project were authorized by the act of October 14, 1949 (63 Stat. 852).

The Sacramento Canals unit of the Sacramento River division of the Central Valley project was authorized by the act of September 26, 1950 (64 Stat. 1036).

The Trinity River Division was authorized as an integral part of the project by the act of August 12, 1955 (69 Stat. 719).

OFFICE OF THE SECRETARY,
Washington, November 26, 1935.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The Supreme Court of the United States in the Parker Dam decision (*United States v. State of Arizona*, 295 U. S. 174) indicated that Section 4 of the Act of June 25, 1910 (36 Stat. 835), is applicable to irrigation projects constructed under the National Industrial Recovery Act and this report on the Central Valley project, California, is made to you under said statute of 1910 and under subsection B of Section 4 of the Act of December 5, 1924 (43 Stat. 702).

Section 4 of the Act of June 25, 1910 (36 Stat. 835), provides, in effect, that after the date of that act no irrigation project to be constructed under the Act of June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, shall be undertaken unless and until the project shall have been recommended

by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924 (43 Stat. 702), provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

GENERAL DESCRIPTION OF PROJECT

The Central Valley project embodies a plan for the conservation, regulation, distribution and utilization of the water resources of the Sacramento and San Joaquin rivers to provide urgently needed water supplies for existing agricultural, industrial and municipal developments in the Sacramento and San Joaquin valleys and upper San Francisco Bay region which contain 3,000,000 acres of settled irrigated and productive land, and a population of 900,000 persons. In addition to providing new water supplies to meet serious problems of water shortage, the project contemplates the restoration of commercial navigation on the upper Sacramento River, increased flood protection for the valley lands, and incidentally the generation of about a billion and a half kilowatt hours annually of hydroelectric energy.

The key unit of the project is Kennett Reservoir on the Sacramento River. A dam 420 feet high will regulate floods and store three million acre-feet of water. Water released from the reservoir, after generating hydroelectric power, will flow down the Sacramento River, maintaining adequate depths for navigation and furnishing ample supplies for irrigation, municipal and industrial use along the main river and in the fertile delta region of the Sacramento and San Joaquin rivers. Intrusion of salt water from the bay into the delta channels—a frequent occurrence in recent years causing substantial loss in crops and threatening destruction of productivity—will be prevented by the released waters. In addition water supplies will be made available in the delta channels for various uses in the nearby upper San Francisco Bay area, and for utilization in the San Joaquin Valley. Conduits to carry the supplies to these areas are provided. The supply for the San Joaquin Valley will be conveyed up the San Joaquin River through a series of pumping plants and intervening natural and artificial channels a distance of 150 miles lifting the water to an elevation of 160 feet above sea level. This water will replace San Joaquin River water now used for irrigation in the northern San Joaquin Valley, thus permitting the entire flow of the San Joaquin River to be regulated in Friant Reservoir—the second storage unit of the project—and to be utilized in the southern San Joaquin Valley where local supplies are deficient. Water from this reservoir will be delivered by gravity through conduits extending northerly and southerly to serve developed irrigated lands in an

area extending from Madera County on the north to Kern County on the south.

The cost of the project, estimated at \$170,000,000, will be met by revenues from the sale of water and power.

WATER SUPPLY

The sources of water supply for the project are the Sacramento and San Joaquin rivers and their tributaries. The State of California, pursuant to acts of the State Legislature has filed notices of appropriation on the principal streams, which are in good standing. Water supplies studies made by the Department of Public Works of California, U. S. War Department and the U. S. Bureau of Reclamation, indicate on the basis of available data that the works of the project will provide an adequate water supply for all purposes.

ENGINEERING FEATURES

The principal engineering features of the project are as follows:

Kennett Dam Unit—The Kennett reservoir, the key unit of the project, is located in the Sacramento River near Redding in Shasta County. The dam will be 420 feet high and store 3,000,000 acre-feet of water. A 175,000 k.v.a. power plant will be located below the dam. A reregulating afterbay with a 50,000 k.v.a. power plant will be constructed below the Kennett dam. From the power plants a 200 mile power transmission line will extend to a main distributing substation near Antioch on Suisun Bay.

Contra Costa Conduit—A canal, capacity 120 second feet, with pumping plants, will extend westerly from the San Joaquin delta for 50 miles through Contra Costa County to supply municipal, industrial and agricultural water requirements.

San Joaquin Pumping System—The works for this pumping system will comprise a dam and other works in Sacramento delta to divert stored water from Kennett reservoir through a channel into San Joaquin delta for salinity control, irrigation and other purposes; dredging of existing channels in the San Joaquin delta; five dams and pumping plants on San Joaquin River to mouth of Merced River; and four pumping plants and 65 miles of canal on the westerly side of San Joaquin Valley which will deliver water to Mendota Weir on San Joaquin River, elevation 160 feet. These works will be capable of furnishing a substituted supply of 1,000,000 acre-feet to 285,000 acres of land now irrigated from San Joaquin River.

Friant Reservoir—A dam, 250 feet high, will be constructed on San Joaquin River, which will store 400,000 acre-feet of water which will permit the diversion of San Joaquin River water southward at elevation 467 feet. One and one-half million acre-feet annually on the average will be available for transmission from the reservoir through the means of the San Joaquin River Pumping System and the purchase of water rights in the San Joaquin River.

Friant-Kern Canal—The Friant-Kern Canal will extend from Friant Reservoir to Kern River, a distance of 157 miles and will be capable of serving an area of 1,000,000 acres of developed land.

Madera Canal—The Madera Canal, maximum capacity 1500 second-feet, will extend from Friant Reservoir to Chowchilla River, a distance of 35 miles and will be capable of furnishing irrigation water to an area of 140,000 acres.

ESTIMATED COST OF PROJECT

Kennett dam, reservoir and power plants.....	\$84,000,000
Kennett transmission line and substation.....	14,000,000
Contra Costa conduit	2,000,000
San Joaquin pumping system.....	19,000,000
Friant dam and reservoir.....	14,000,000
Friant-Kern Canal	26,000,000
Madera Canal	3,000,000
Rights of way, water rights and general expense.....	8,000,000
Total	170,000,000

FIRST YEAR CONSTRUCTION PROGRAM

Under date of September 10, 1935, you approved an allocation of \$20,000,000 for the Central Valley project, which amount was later reduced to \$15,000,000. Construction on the following units is recommended for the first year:

Kennett Reservoir Unit
Contra Costa Conduit
Friant Dam and Canals

An amount of \$15,000,000 can be efficiently and economically expended on the foregoing units during the first year of construction.

ADAPTABILITY OF LAND FOR IRRIGATION, CROP PRODUCTION
AND SETTLEMENT

The climate is favorable and the soil, if water is available, is adaptable to the production of a wide variety of crops. The principal crops now raised in the San Joaquin valley are citrus and deciduous fruits, grapes, alfalfa, cotton, nuts, and figs; in the Delta, asparagus, celery, potatoes, as well as deciduous fruits; and in the Sacramento valley there is a heavy production of rice in addition to other grains and deciduous fruits.

The valley is highly developed. The lands are of high value and produce large returns. With an attractive climate, fertile soil and stable markets, water is the one remaining necessity to prosperous, successful agricultural industry. It has been highly successful and supports a large farm population. Much of the fruit is shipped to eastern markets but many other items, such as the products of dairying, are marketed within the state and reduce the quantities imported into the state. Products are largely noncompetitive with other sections of the country, since many of them, such as nuts, figs, raisins, asparagus, are produced almost wholly in California.

Transportation facilities are excellent. These include railroads and improved highways leading to the Metropolitan center of Los Angeles and San Francisco and to eastern markets.

The project is not designed for bringing new lands into cultiva-

tion, but for the maintenance of existing agricultural development and existing civilization of a high type. Any increase in irrigated land will be small and will come into being slowly over a long period of time. Part of the water supply is to be obtained by the purchase of water now used for the irrigation of pasture lands and this will result in the retirement from use of 250,000 acres of submarginal land, as compared to a small and gradual increase of irrigated land.

SOCIAL AND ECONOMIC VALUES

The economic values of the project are of great magnitude. The project will not bring into production new agricultural areas but will maintain present values and civilization. Of the 3,000,000 acres now irrigated, 1,000,000 face acute water shortage, and abandonment is proceeding rapidly. The values in jeopardy are large, as without water, not only will lands dry up, but communities will vanish and whole sections return to desert, as is now occurring in the San Joaquin valley. A share of the loss will be suffered by persons not residing in the areas directly affected.

Control of salinity in the delta of the two rivers near Sacramento is part of the agricultural maintenance phase of the project. Here 400,000 irrigated acres with an annual crop value of \$30,000,000 are menaced by salt water from upper San Francisco Bay. Some abandonment has occurred and the whole area is endangered. In this same general area is a large industrial section which is also short of water by reason of increasing salinity. Here 100 industrial plants produce annually \$100,000,000 value of manufactured products, and while not facing extinction, are suffering damage and expense from lack of water.

Navigation on the Sacramento river, one of the important waterways of the nation, has been greatly damaged by low water, navigation having been practically abandoned above Sacramento in the summer season. The national navigation and flood values of the project have been found by the War Department to be \$12,000,000, and the recently enacted Rivers and Harbors Bill (Public No. 409, 74th Congress), by reference to the War Department report approves the project and authorizes the appropriation of \$12,000,000 for it.

A large power house at the main storage dam will produce nearly a billion and a half kilowatt hours of electric energy annually, which will be sold at less than existing rates, thereby benefiting power users and at the same time producing a large revenue, which will go toward the repayment of the construction costs.

PROBABLE RETURN TO RECLAMATION FUND OF COST OF CONSTRUCTION

The next declaration required is that the cost of construction will probably be returned to the Federal Government. This is interpreted to mean that it will be returned within forty years

from the time the Secretary issues public notice that water is available from the project works. The estimated cost of construction is \$170,000,000 and the annual cost including repayment of all other charges is \$7,500,000. It is estimated that annual revenues from the sale of water and of electric power will be sufficient to cover these charges. The favorable conditions heretofore recited justify the belief that the project will return its cost.

I find that the project is feasible from engineering, agricultural and financial standpoints, that it is adaptable for settlement and farm homes, that the estimated construction cost is adequate and that the anticipated revenues will be sufficient to return the cost to the United States.

The Commissioner of Reclamation has approved and recommended the construction of the project. I therefore recommend the approval of the Central Valley development as a Federal reclamation project.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved December 2, 1935.

(Signed) FRANKLIN D. ROOSEVELT,
President.

FIRST DEFICIENCY APPROPRIATION ACT, 1936

[Extract from] An act making appropriations to supply deficiencies in certain appropriations for the fiscal year ending June 30, 1936, and prior fiscal years, to provide supplemental appropriations for the fiscal years ending June 30, 1936, and June 30, 1937, and for other purposes. (Act of June 22, 1936, 49 Stat. 1597, 1622, Public Law 739, 74th Cong., 2d sess.)

* * * That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, to supply deficiencies in certain appropriations for the fiscal year ending June 30, 1936, and prior fiscal years, to provide supplemental appropriations for the fiscal years ending June 30, 1936, and June 30, 1937, and for other purposes, namely:

* * * * *

Central Valley Project, California: For continuation, \$6,900,000, to remain available until June 30, 1937, of which \$6,000,000 shall be available for construction of Friant Reservoir and irrigation facilities therefrom in the San Joaquin Basin and \$250,000 for administrative expenses (including personal services in the District of Columbia and elsewhere), to be available for the same purposes as those specified for the projects included in the Interior Department Appropriation Act for the fiscal year 1937 under the caption "Bureau of Reclamation" and to be reimbursable under the Reclamation Law: *Provided*, That not to exceed \$25,000 may be expended for personal services in the District of Columbia.

RIVERS AND HARBORS ACT OF 1937

[Extract from] An act authorizing the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes. (Act of August 26, 1937, 50 Stat. 844, 850, Public Law 392, 75th Cong., 1st sess.)

* * * SEC. 2. That the \$12,000,000 recommended for expenditure for a part of the Central Valley project, California, in accordance with the plans set forth in Rivers and Harbors Committee Document Numbered 35, Seventy-third Congress, and adopted and authorized by the provisions of section 1 of the Act of August 30, 1935 (49 Stat. 1028, at 1038), entitled "An Act authorizing the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes," shall, when appropriated, be available for expenditure in accordance with the said plans by the Secretary of the Interior instead of the Secretary of War: *Provided*, That the transfer of authority from the Secretary of War to the Secretary of the Interior shall not render the expenditure of this fund reimbursable under the reclamation law: *Provided further*, That the entire Central Valley project, California, heretofore authorized and established under the provisions of the Emergency Relief Appropriation Act of 1935 (49 Stat. 115) and the First Deficiency Appropriation Act, fiscal year 1936 (49 Stat. 1622), is hereby reauthorized and declared to be for the purposes of improving navigation, regulating the flow of the San Joaquin River and the Sacramento River, controlling floods, providing for storage and for the delivery of the stored waters thereof, for the reclamation of arid and semiarid lands and lands of Indian reservations, and other beneficial uses, and for the generation and sale of electric energy as a means of financially aiding and assisting such undertakings and in order to permit the full utilization of the works constructed to accomplish the aforesaid purposes: *Provided further*, That, except as herein otherwise specifically provided, the provisions of the reclamation law, as amended, shall govern the repayment of expenditures and the construction, operation, and maintenance of the dams, canals, power plants, pumping plants, transmission lines, and incidental works deemed necessary to said entire project, and the Secretary of the Interior may enter into repayment contracts, and other necessary contracts, with State agencies, authorities, associations, persons, and corporations, either public or private, including all agencies with which contracts are authorized under the reclamation law, and may acquire by proceedings in eminent domain, or otherwise, all lands, rights-of-way, water rights, and other property necessary for said purposes: *And provided further*, That the said dam and reservoirs shall be used, first, for river regulation, improvement of navigation, and flood control; second, for irrigation and domestic uses; and, third, for power.

RIVERS AND HARBORS ACT OF 1940

[Extract from] An act authorizing the improvement of certain rivers and harbors in the interest of the national defense, and for other purposes. (Act of October 17, 1940, 54 Stat. 1198, 1199, Public Law 868, 76th Cong., 3d sess.)

* * * That the following works of improvement of rivers, harbors, and other waterways are hereby adopted and authorized, to be prosecuted in the interest of the national defense under the direction of the Secretary of War and supervision of the Chief of Engineers, in accordance with the plans recommended in the respective reports hereinafter designated and subject to conditions set forth therein:

SEC. 2. * * * The second proviso in section 2 of the Act of August 26, 1937 (50 Stat. 844, 850), authorizing the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes, is hereby amended to read as follows: *Provided further*, That the entire Central Valley project, California, heretofore authorized and established under the provisions of the Emergency Relief Appropriation Act of 1935 (49 Stat. 115) and the First Deficiency Appropriation Act, fiscal year 1936 (49 Stat. 1622), is hereby reauthorized and declared to be for the purposes of improving navigation, regulating the flow of the San Joaquin River and the Sacramento River, controlling floods, providing for storage and for the delivery of the stored waters thereof, for construction under the provisions of the Federal reclamation laws of such distribution systems as the Secretary of the Interior deems necessary in connection with lands for which said stored waters are to be delivered, for the reclamation of arid and semiarid lands and lands of Indian reservations, and other beneficial uses, and for the generation and sale of electric energy as a means of financially aiding and assisting such undertakings, and in order to permit the full utilization of the works constructed to accomplish the aforesaid purposes.

AMERICAN RIVER DIVISION

[H. Doc. No. 496, 80th Cong., 2d sess.]

MESSAGE FROM THE PRESIDENT OF THE UNITED STATES TRANSMITTING HIS RECOMMENDATION THAT CONGRESS EXPAND THE PRESENT AUTHORIZATION FOR THE CONSTRUCTION OF FOLSOM DAM

TO THE CONGRESS OF THE UNITED STATES:

The estimates of appropriation for civil functions of the Corps of Engineers, Department of the Army, in the 1949 budget include \$3,370,000 for beginning construction of the Folsom Dam on the American River in California. This project was authorized for construction by the Corps of Engineers in the Flood Control Act approved December 22, 1944—"substantially in accordance with the plans contained in House Document Numbered 649, Seventy-eighth Congress, second session, with such modifications thereof as in the discretion of the Secretary of War and the Chief of Engineers may be advisable * * *."

The Corps of Engineers, the Bureau of Reclamation of the Department of the Interior, and the State of California are agreed that the initial plans, for a reservoir of 355,000 acre-feet capacity, should be revised to provide a reservoir of 1,000,000 acre-feet. This will not only provide more adequate storage for flood control but will also provide adequate storage at the Folsom Dam site for irrigation, hydroelectric-power production, and other uses consistent with the conservation of water resources in the Central Valley area. The Corps of Engineers is completing construction plans for the dam on this revised basis and work can be started promptly.

The Folsom Dam and Reservoir is a key unit in any plan for the full development of the water resources of the Central Valley. There is an urgent need for this structure, not only from the standpoint of flood control, but also to provide additional electric energy and conservation of water to meet growing demands in the area. The Corps of Engineers should therefore be given funds to start building the dam at once under the authority of existing legislation. At the same time the authority contained in existing law for the construction of Folsom Dam should be expanded to permit the Bureau of Reclamation to construct and operate a power plant.

The power plant at Folsom must be integrated with the hydroelectric-power plants at Shasta and Keswick, constructed and operated by the Bureau of Reclamation, and with the Delta-Mendota

pumping plant of the Central Valley project—all of which must be operated as a unit. To achieve such coordinated operation the Folsom Dam and Reservoir, once constructed, should be transferred to the Bureau of Reclamation for operation and maintenance. After the transfer the dam would be operated for flood control in accordance with criteria established by the Secretary of the Army, as provided in section 7 of the Flood Control Act of 1944.

The transfer to the Bureau of Reclamation would assure that Folsom Dam and its important related developments would be operated in coordination with other Federal Conservation structures in the Central Valley to yield the greatest possible benefits. Power produced at the Folsom Dam would be used as a second source of energy for the Delta-Mendota pumping plant and for other irrigation pumping. The income from the disposition, under Federal reclamation laws, of the power there produced would assist not only in amortizing the cost of the Folsom Dam and power plant, but also in paying an appropriate share of the cost of irrigation canals and other works needed to distribute water from Folsom Reservoir to irrigation districts, cities, and suburban areas. Unless this income from power revenues is provided for in accordance with established practice under reclamation law, many related developments proposed in the Central Valley, particularly in the American River Basin and nearby areas of California, will not be financially feasible.

I recommend therefore that the Congress expand the present authorization for the construction of Folsom Dam to provide (1) for the transfer of the dam and reservoir, upon its completion, to the Bureau of Reclamation for operation and maintenance as a coordinated unit of the Central Valley project under the Federal reclamation law; (2) for construction by the Bureau of Reclamation of a power plant, afterbay, and necessary transmission lines, and (3) for construction by the Bureau of Reclamation of irrigation canals and related works needed to deliver water from the reservoir to irrigation districts, cities, and suburban areas. There are pending in the Congress two bills (H. R. 4152 and H. R. 4157), either one of which, if enacted into law with appropriate amendments, would accomplish these purposes.

(Signed) HARRY S. TRUMAN,
President.

THE WHITE HOUSE,
January 12, 1948.

THE WHITE HOUSE,
Washington, February 25, 1949.

HON. ANDREW L. SOMERS,
*Chairman, Committee on Public Lands,
House of Representatives, Washington, D. C.*

DEAR MR. CHAIRMAN: Work is now under way on Folsom Dam, on the American River in California, which was authorized for construction by the Corps of Engineers, Department of the Army, in the Flood Control Act, approved December 22, 1944.

Last year, in a message dated January 12, 1948, I recommended that the Congress expand the present authorization for the construction of Folsom Dam to provide (1) for the transfer of the dam and reservoir, upon its completion, to the Bureau of Reclamation for operation and maintenance as a coordinated unit of the Central Valley project under the Federal reclamation law; (2) for construction by the Bureau of Reclamation of a power plant, after-bay, and necessary transmission lines; and (3) for construction by the Bureau of Reclamation of irrigation canals and related works needed to deliver water from the reservoir to irrigation districts, cities, and suburban areas. For the reasons set forth in my message last year, I believe that these recommendations will provide for the achievement of the greatest possible benefits for the people of California and the Nation from the multiple purpose use of the waters to be controlled by the dam.

Although action on these recommendations was not completed in the Eightieth Congress, a number of bills to accomplish these same purposes are pending in the present Congress. I hope that your committee and the Congress will act favorably on legislation to carry out these recommendations.

Sincerely yours,

(Signed) HARRY S. TRUMAN,
President.

AUTHORIZATION AMERICAN RIVER DIVISION, CENTRAL VALLEY PROJECT

An act to authorize the American River Basin development, California, for irrigation and reclamation, and for other purposes. (Act of October 14, 1949, 63 Stat. 852, Public Law 356, 81st Cong., 1st sess.)

* * * That the Central Valley project, California, authorized by section 2 of the Act of Congress of August 26, 1937 (50 Stat. 850), is hereby reauthorized to include the American River development as hereinafter described, which development is declared to be for the same purposes as described and set forth in the Act of Congress of August 26, 1937 (50 Stat. 850).

SEC. 2. The American River development shall consist of: Folsom Dam and Reservoir having a storage capacity of approximately one million acre-feet, to be constructed by the Corps of Engineers at such point below the confluence of the North Fork and the South Fork of the American River near the city of Folsom, California, as the Secretary of the Army and the Chief of Engineers after consultation with the Bureau of Reclamation and other appropriate State, Federal, and local agencies may find most advisable; and the following features for the development and use of water, to be constructed, operated, and maintained by the Secretary of the Interior through the Commissioner of Reclamation: A hydroelectric power plant with a generating capacity of approximately one hundred and twenty thousand kilowatts, and necessary hydroelectric afterbay power plants and necessary electric transmission lines to the nearest practical interconnection with the Central Valley project transmission system; a storage dam with a capacity of approximately forty thousand acre-feet to be located on Sly Park Creek, a tributary of the North Fork of Consumas River, with necessary appurtenant works, including a diversion dam on Camp Creek, tunnel, conduit, and canals for the delivery of water to lands in El Dorado County, and incidental works appurtenant thereto. The Secretary of the Interior, through the Bureau of Reclamation, is hereby further authorized and directed to conduct the necessary investigations, surveys, and studies for the purpose of developing plans for disposing of the water and electric power which would be made available by the project, including studies of such supplemental works and equipment as may be required to maintain a firm supply of electric energy, and render reports thereon which would set forth the works required for such disposition, together with findings as to their engineering and financial feasibility, including a study of the water resources and requirements of the entire American River watershed and the areas serviceable therefrom, and particularly of a diversion canal at the highest feasible level extending southerly from Folsom Reservoir as will permit the maximum beneficial use of the water for irrigation of the lands lying under said canal in El Dorado

and Sacramento Counties; a diversion canal at the highest feasible level for the purpose of securing the maximum beneficial use of the water in Placer County extending northerly from such reservoir to a point on the Bear River in the vicinity of Sheridan, California, and a conduit or conduits with necessary pumping plants and supplemental works extending from the most feasible diversion point on the Central Valley project, California, to serve lands and municipalities in Contra Costa, Alameda, Santa Clara, San Joaquin, and San Benito Counties.

Nothing contained in this Act shall be construed by implication or otherwise as an allocation of water and in the studies for the purposes of developing plans for disposal of water as herein authorized the Secretary of the Interior shall make recommendations for the use of water in accord with State water laws, including but not limited to such laws giving priority to the counties and areas of origin for present and future needs.

Said studies and the reports thereon shall be submitted to the proper State authorities under the procedure provided for in the Flood Control Act of 1944 (Public Law 534, Seventy-eighth Congress, second session).

Folsom Dam and Reservoir, upon completion of construction by the Corps of Engineers, to the extent where water from said reservoir is ready to be turned either into the power plant or conduits, shall be transferred to the Bureau of Reclamation for operation and maintenance under the supervision of the Secretary of the Interior together with the other features of the American River development herein authorized for construction by the Bureau of Reclamation, all in accordance with the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto). After the transfer as provided herein, the dam shall be operated for flood control in accordance with criteria established by the Secretary of the Army as provided for in section 7 of the Flood Control Act of 1944 (Public Law 534, Seventy-eighth Congress, second session).

SEC. 3. In locating and designing the works authorized for construction by section 2 of this Act the Secretary of the Army and the Chief of Engineers, the Secretary of the Interior and the Commissioner of Reclamation shall give due consideration to the report set forth in Bulletin Numbered 26 of the Division of Water Resources of the Department of Public Works of the State of California, and shall consult the local interests to be affected by the construction and operation of said works, through public hearings or in such other manner as in their discretion may be found best suited to a maximum expression of the views of such local interest.

SEC. 4. The Secretary of the Interior is directed to cause the operation of said works to be coordinated and integrated with the operation of existing and future features of the Central Valley project in such manner as will effectuate the fullest and most economic utilization of the land and water resources of the Central Valley project of California for the widest possible public benefit.

SEC. 5. There are hereby authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, such sums as are necessary to carry out the purposes of this Act.

SACRAMENTO RIVER DIVISION

AUTHORIZATION SACRAMENTO VALLEY IRRIGATION
CANALS, CENTRAL VALLEY PROJECT

An act to authorize Sacramento Valley Irrigation Canals, Central Valley Project, California.
(Act of September 26, 1950, 64 Stat. 1036, Public Law 839, 81st Cong., 2d sess.)

* * * That the entire Central Valley project heretofore authorized under the Act of October 26, 1937 (50 Stat. 844, 850), and the Act of October 17, 1940 (54 Stat. 1198, 1199), is hereby reauthorized and declared to be for the purposes of improving navigation, regulating the flow of the San Joaquin River and the Sacramento River, controlling floods, providing for storage and for the delivery of the stored waters thereof, for construction under the provisions of the Federal reclamation laws of such distribution systems as the Secretary of the Interior deems necessary in connection with lands for which said stored waters are to be delivered, for the reclamation of arid and semiarid lands and lands of Indian reservations, and other beneficial uses, and for the generation and sale of electric energy as a means of financially aiding and assisting such undertakings, and in order to permit the full utilization of the works constructed to accomplish the aforesaid purposes.

SEC. 2. The features herein authorized shall include an irrigation canal, generally known as the Tehama-Colusa Conduit, to be located on the west side of the Sacramento River and equipped with all necessary pumping plants and appurtenant works, beginning at the Sacramento River near Red Bluff, California, and extending southerly through Tehama, Glenn, and Colusa Counties so as to permit the most effective irrigation of the irrigable lands lying in the vicinity of said canal and supply water for industrial, domestic, and other beneficial uses for these lands in Tehama, Glenn, and Colusa Counties or such alternate canals and pumping plants as the Commissioner of Reclamation and the Secretary of the Interior may deem necessary to accomplish the aforesaid purposes.

The features herein authorized shall also include an irrigation canal, generally known as the Chico Canal, to be located on the east side of the Sacramento River and equipped with all necessary pumping plants and other appurtenant works, beginning at the Sacramento River near Vina, California, and extending through Tehama and Butte Counties to a point near Durham, California, so as to permit the most effective irrigation of the lands lying in the vicinity of said canal and supply water for industrial, domestic, and other beneficial uses for these lands lying within Tehama

and Butte Counties or such alternate canals and pumping plants as the Commissioner of Reclamation and the Secretary of the Interior may deem necessary to accomplish the aforesaid purposes.

SEC. 3. In locating and designing the works authorized for construction by section 2 of this Act, the Secretary of the Interior and the Commissioner of Reclamation shall give due consideration to the reports set forth in Bulletins numbered 13 and 26 of the Division of Water Resources of the Department of Public Works of the State of California, and shall consult the local interests to be affected by the construction and operation of said works, through public hearings or in such other manner as in their discretion may be found best suited to an expression of the views of such local interests.

SEC. 4. The provisions of the reclamation law, as amended, shall govern the repayment of expenditures made for the works herein authorized for construction, and the Secretary of the Interior is directed to cause the operation of said works and repayment thereof to be coordinated and integrated with the operation of and repayment schedule for the existing features of the Central Valley project in such manner as will effectuate the fullest and most economic utilization of the land and water resources of the Central Valley of California for the widest possible public benefit.

SEC. 5. There are hereby authorized to be appropriated such funds as may be necessary to construct the works authorized in section 2 of this Act: *Provided*, That no expenditure of funds shall be made for construction of this project until the Secretary of the Interior, with the approval of the President, has submitted to the Congress, with respect to such works, a completed report and finding of feasibility under the provisions of the Federal reclamation laws.

UNITED STATES DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
April 14, 1952.

THE SECRETARY OF THE INTERIOR.

SIR: This is my proposed report on the Sacramento Canals Unit, Sacramento River Division, Central Valley Project (Ultimate Plan), California. My report is based on and incorporates the accompanying report of the Regional Director, Bureau of Reclamation, Sacramento, Calif., dated December 21, 1951. This report, it is expected, will form the basis for the finding of feasibility required by section 5 of Public Law 839, 81st Congress, which authorized the canals.

The Regional Director's report presents a plan which includes, in addition to the Sacramento canals, a small power development on the Tehama-Colusa Canal near Mooney Island and recommends

construction thereof. I do not concur in that recommendation for power development because the estimated power accomplishments do not justify the high cost of the power facilities. The Mooney Island power development is therefore deleted from the features recommended for construction but retained without prejudice as a possible future addition pending completion of studies now under way of other possible sites. If the power development is later considered feasible as a result of these studies or under different economic conditions, it will be presented in a separate report.

The Sacramento canals are proposed as supplemental works to the Central Valley project to be integrated operationally and financially therewith. As a result of this integration, the land and water resources of the Central Valley, including imported water, would be utilized more completely and economically for public benefit throughout the valley. The canals are included in California's plan for developing the State's water resources, and are included in and considered an essential part of this Department's comprehensive Central Valley Basin plan, as set forth in Senate Document 113, 81st Congress. The rapid increase in California's population during the last few years has brought about the need for early expansion of irrigated agriculture in the Sacramento Valley.

Construction and operation of the Sacramento canals and their integration with the existing Central Valley project would permit irrigation of a net area of about 205,000 acres. Increased production of livestock products and expansion in orchard enterprises would result. In addition, substantial benefits would accrue to recreation and fish and wildlife from increased recreational opportunities and improvement in habitat for upland game and waterfowl.

The above accomplishments would be effected through construction and operation of three main conveyance canals diverting from the Sacramento River, and related distribution and drainage systems. Additional storage facilities will be needed in the future to maintain a firm water supply as the areas to be served by Central Valley project works, including those served by the Sacramento canals, approach full development.

The largest of the proposed Sacramento canals, called the Tehama-Colusa, is a gravity canal, 120 miles long, extending from Red Bluff along the west side of the valley to a point near the Colusa-Yolo County line. A dam would be constructed across the Sacramento River near Red Bluff for diverting water into this canal. The other two proposed canals are the Corning Canal, 26 miles long, on the west side of the valley and the Chico Canal, 19 miles long, on the east side of the valley. These two canals would be supplied by pumping from the river. Additional pumping plants would be required as a part of the distribution systems serving lands lying above the main conveyance canals. The total construction cost of the three conveyance canals, including the diversion dam and pumping plants at the river, is estimated at \$54,510,000 on the basis of prices prevailing in the period April-July 1951, and the annual operation and maintenance costs, including a reserve

for replacements, are estimated to be \$527,000. The cost of the distribution systems, which might be built by local interests if they so desire, is estimated at \$60,155,000 and their annual operation, maintenance, and replacement costs are estimated at \$593,000.

No unusual problems in construction of the Sacramento canals are anticipated. The water supply from Central Valley project storage reservoirs, existing and under construction, is ample for the present, but would need to be augmented through additional storage in the future as demands for water from the Central Valley project grow. It is expected that this storage will be obtained through construction of the Trinity River division, a report on which I am transmitting to you concurrently recommending authorization and construction thereof.

The proposed new works are economically justified, producing benefits which exceed the costs in a ratio of more than 2 to 1. The deletion of the Mooney Island power development would not cause any significant change in the economic justification. As it is expected that the future water supply will be made available through the authorization and construction of the Trinity River division, the cost of future storage included in the economic study, and in the financial study discussed hereinafter, is based on this assumption. However, costs and feature allocations of the Trinity division appearing in the Trinity report are based on an operation study which takes into account full integration of the Trinity division with the Central Valley project, and differ slightly from those on which the storage cost given in the Sacramento canals report is used. These costs and allocations as given in the Trinity report are more nearly final and should control Trinity elements in the canals report. Thus, the share of Trinity division costs allocated to the Sacramento canals should be about \$54,500,000, based on the Trinity report, rather than the \$60,155,000 shown in the canals report.

The integration of the Sacramento canals with the existing Central Valley project from the viewpoint of both operations and finances is already provided for in Public Law 839, 81st Congress, and requires allocation and repayment studies of the enlarged project under the new and enlarged conditions.

In the payment analysis, the regional director has assumed an average irrigation water service rate on supply facilities of \$2.50 per acre-foot at canalside. This was based upon a reconnaissance land classification and the assumption that future prices would approximate those of the period 1939-44 (index of 144 with 1910-14 = 100). A detailed land classification of representative areas made recently indicates that the productivity of the lands is better than was estimated at the time the basic data for the report were prepared, thereby resulting in higher payment capacity. Also, the Bureau of Reclamation now assumes an index of 215 as the long-range estimate of agricultural prices which are likely to prevail, further increasing payment capacity. Adjustment of the \$2.50 per acre-foot water service rate to the 215 price index results in a water service base rate of \$3.35 per acre-foot.

In order to give the irrigators as much relief as practicable

during periods of unfavorable economic conditions, and at the same time to obtain for the Federal Government a fair share of the returns, a payment formula is proposed which would vary the water rate annually to accommodate changes in price levels and relationships. If economic levels should be lower than predicted, less revenues would be collected; if higher, more revenues would be collected. During the initial 10-year period, a ceiling on annual payments would be operation and maintenance plus \$1 per acre-foot in order to assist the irrigators while developing their land for irrigation.

Inasmuch as the water service base rate of \$3.35 per acre-foot was determined as an average for the three land classes, it is desirable that the irrigation districts vary assessments and charges by land classes.

The substitution of the above repayment proposal, the deletion of the Mooney Island power development, and the substitution of the later costs and allocations contained in the Trinity River division report for those contained in the Sacramento canals unit report insofar as they pertain to costs and allocations of the Trinity River division features, would all have the effect of improving the anticipated repayment as presented in the regional director's report. The costs of the enlarged project allocated to irrigation, municipal and industrial water service, and commercial power can be repaid under provisions of reclamation law. The cost allocated to future use can be repaid by revenues from the above revenue-producing purposes in the event that future developments, which would make use of the excess capacities in the existing project, are not authorized and developed. Revenues from other portions of the Central Valley project, existing and under construction, will be available for return of that portion of the construction cost of the Sacramento canals in excess of the amount the water users can repay.

I concur in and adopt the recommendations of the regional director as set forth in his report except as modified in the preceding paragraphs.

I recommend that you approve and adopt this report as your proposed report on the Sacramento canals unit, Sacramento River division, Central Valley project (Ultimate Plan), California, and that you authorize me to transmit it, in your behalf, to the Secretary of the Army and to the State of California for their views and recommendations in accordance with provisions of section 1 (c) of the Flood Control Act of 1944 (58 Stat. 887), to the State of California for the report and recommendations of the head of the agency exercising administration over the wildlife resources of that State in accordance with the provisions of the act of August 14, 1946 (60 Stat. 1080), and to other interested Federal agencies for their views and comments.

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved and adopted: May 2, 1952.

(Signed) OSCAR L. CHAPMAN,
Secretary of the Interior.

TRINITY RIVER DIVISION AND SACRAMENTO CANALS UNIT

OFFICE OF THE SECRETARY,
Washington 25, D. C., December 9, 1952.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget.)

MY DEAR MR. PRESIDENT: Enclosed are reports on the Trinity River Division and the Sacramento Canals Unit, proposed additions to the Central Valley Project. The Trinity River Division report is transmitted to you in accordance with the provisions of section 9 of the Reclamation Project Act of 1939 (53 Stat. 1187) and the Sacramento Canals Unit report in accordance with the provisions of section 5 of the Act of September 26, 1950 (P. L. 839, 81st Congress).

As you were advised by letter of May 2, 1952, which transmitted copies of the proposed reports for your information, these two reports are closely interrelated in two ways. First, the costs, allocations, and the economic and repayment analyses in both reports are intertwined. The two reports are cross-referenced clearly to indicate these relationships. Second, the Trinity River Division works are required as a physical means of providing the water supply needed over the long run for the Sacramento Canals Unit. When, in its letter of May 4, 1949, this Department reported on the bill (H.R. 163, 81st Congress) which became the Act of September 26, 1950, providing for construction of the Sacramento Valley Canals Unit, it was pointed out that only by integration of that unit with the existing Central Valley Project and with additional water storage and power facilities "would it be possible to obtain the necessary water supply and financial assistance for the enlarged service area." The Trinity River Division works are designed to fulfill these needs. I am advised that, regardless of whether what is commonly referred to as the California county-of-origin law is applicable to the Trinity River Division, there will be ample water available from that source to fill the needs of those to be served by the Sacramento Valley Canals Unit.

The Trinity River Division Report recommends authorization for construction of (1) Trinity Dam and Reservoir having a capacity of 1,800,000 acre-feet; (2) four power developments consisting of diversion dams, tunnels, and powerplants having a combined installed capacity of 218,000 kilowatt; (3) a 70,000-kilowatt addition to the authorized, but not yet constructed, Delta steam electric powerplant of the Central Valley Project; and (4) neces-

sary transmission and substation facilities. The above works are estimated to cost \$207,334,000 on the basis of prices prevailing in July 1951, which were slightly lower than at present.

The Sacramento Canals Unit report recommends construction of three main conveyance canals diverting from the Sacramento River to accomplish the purposes provided in section 2 of the Act of September 26, 1950. The estimated cost of these canals is \$54,396,000 on the basis of prices prevailing in July 1951. The estimated cost would be slightly more on the basis of present prices. The cost of the distribution systems, which might be built by local interests, is estimated at \$50,114,000.

The proposed reports of the Secretary of the Interior on these two developments were transmitted to the State of California, to the State of Oregon in the case of the Trinity River Division, and to the Secretary of the Army for their views and recommendations, in accordance with the provisions of section 1 of the Flood Control Act of December 22, 1944; to the State of California for the report and recommendations of the head of the agency exercising administration over the wildlife resources of that State in accordance with the provisions of the Act of August 14, 1946, (60 Stat. 1080); and to the agencies represented on the Federal Inter-Agency River Basin Committee for their information and comments. Copies of comments which, of this date, have been received from the State of Oregon on the Trinity report, from the State of California on the Sacramento Canals report, and from the Department of Commerce, the Public Health Service, and the Federal Power Commission on both reports, are attached.

The Central Valley Project, as conceived by both the State of California and the Federal government, is not a static thing. It must continue to grow with the growth of the great Central Valley. I have been concerned that we are falling further and further behind in our goal of meeting the expanding water and power needs of the area. The Trinity River Division and the Sacramento Canals Unit are urgently needed to provide electric energy and water for irrigation to an area where shortages of both these services exist and greater shortages are expected in the next few years. These two developments taken together are a logical extension of the existing Central Valley Project. In view of this and the fact that already more than 180 days, twice the period provided by law for review, have expired since the reports were received by the State of California and the Secretary of the Army, I believe it unwise to wait longer for additional comments. Enclosed is a copy of a letter to Governor Warren in this connection.

I shall appreciate having advice concerning the relationship of the Trinity River Division to your program before I transmit that report to the Congress. I shall also appreciate receiving your approval, as provided in the Act of September 26, 1950, on my submission of the Sacramento Valley Canals Unit report to the Congress. I hope to transmit the two reports to the Congress simultaneously.

Sincerely yours,

(Signed) OSCAR L. CHAPMAN,
Secretary of the Interior.

THE WHITE HOUSE
Washington, January 19, 1953.

The honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: I have your report on the Sacramento Canals project, California. I understand that you have found the project feasible under the provisions of the Federal Reclamation laws as indicated by your approval and adoption on December 9, 1952, of Commissioner Straus' letter to you dated November 14, 1952, in which he states "I find that the Sacramento Canals Unit has engineering feasibility on the basis that the Trinity River Division, upon which the Canals Unit is dependent for a firm water supply as discussed herein, will be authorized and constructed."

I have no objection to your submitting the report to the Congress for its consideration. It is requested that a copy of this letter be transmitted with your report.

Sincerely yours,

(Signed) HARRY S. TRUMAN,
President.

OFFICE OF THE SECRETARY,
Washington 25, D.C., January 19, 1953.

HON. JOSEPH W. MARTIN,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: In accordance with the requirements of Section 5 of the Act of September 26, 1950, which authorized the Sacramento Canals Unit of the Central Valley Project, California, I submit herewith my report and findings on this unit.

The Sacramento Canals Unit consists of three main conveyance canals diverting from the Sacramento River for irrigation of a net area of about 205,000 acres. The estimated cost of these canals is \$54,396,000.

Copies of my proposed report were transmitted on May 2, 1952, to the State of California and to the Secretary of the Army in accordance with the provisions of Section 1 of the Flood Control Act of December 22, 1944, and to other Federal agencies represented on the Federal Inter-Agency River Basin Committee. Copies of comments which were received are enclosed.

On December 9, 1952, my report on the Sacramento Canals Unit

was transmitted to the President, through the Bureau of the Budget. I have been advised by the Director of the Bureau of the Budget that there is no objection to the transmittal of the report to the Congress, subject to the attached letter from the President.

The requirement of Section 5 of the Act of September 26, 1950, having been met, it follows that, upon appropriation thereof, the expenditure of funds for the construction of the Sacramento Canals Unit may now be made.

Sincerely yours,

(Signed) OSCAR L. CHAPMAN,
Secretary of the Interior.

Identical letter sent to Hon. Alben W. Barkley, President of the Senate.

TRINITY RIVER DIVISION

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D.C., April 14, 1952.

THE SECRETARY OF THE INTERIOR.

SIR: This is my proposed report on the Trinity River division, Central Valley project (ultimate plan), California. My report is based on and incorporates the accompanying report of the regional director, Bureau of Reclamation, Sacramento, Calif., dated January 31, 1952. It is a departmental report recognizing the interests of other Departmental agencies and including, in addition to Reclamation's report, reports by the National Park Service and the Fish and Wildlife Service.

The report presents a plan to conserve and put to beneficial use for irrigation a part of the surplus flows of the Trinity River, and at the same time to generate hydroelectric energy and improve the fishery. The development is proposed as supplemental works to Central Valley project, to be integrated operationally and financially therewith.

This proposed development should be undertaken at the earliest possible date. It will help to forestall a serious water and power shortage in northern and central California and contribute to the long term defense effort. It will help maintain the economy of an area where the population is increasing by leaps and bounds and industry is rapidly expanding. There is immediate need for additional sources of irrigation water supply for the Central Valley and for increased hydroelectric generating capacity for northern California. Studies by this Bureau indicate that serious shortages of

both electric energy and irrigation water will develop within a few years unless new generating capacity is added and a new water supply made available. This proposed development would meet the most pressing needs now and in the immediate future for both power and water. In my report on the Sacramento canals, which I am transmitting to you concurrently, I have pointed out that additional storage would be needed to maintain a firm water supply to areas served by the Central Valley project works including the Sacramento canals and that it is expected that this storage would be obtained through construction of the Trinity River division.

Construction and operation of the Trinity River division, and integration of its features with those of the existing Central Valley project would (a) make available about 1,000,000 acre-feet of water for irrigation in the Central Valley and thereby maintain a firm supply to Central Valley project works already authorized; (b) increase the amount of electric energy available to the northern California market by about 1,617,000,000 kilowatt-hours annually; and (c) increase the recreational opportunities in the Trinity River Basin.

The above accomplishments would be effected through construction of (1) Trinity Dam and Reservoir having a capacity of 1,800,000 acre-feet; (2) four power developments consisting of diversion dams, tunnels, and power plants having a combined installed capacity of 218,000 kilowatts; (3) a 70,000-kilowatt addition to the Delta steam electric power plant of the Central Valley project; and (4) necessary transmission and substation facilities. The plan of development would use for generation of electric energy the difference in elevation of about 1,850 feet between the spillway crest of Trinity Reservoir and the tailwater below the existing Keswick power plant. The above works are estimated to cost \$207,334,000 on the basis of prices prevailing in July 1951. Under full development, the annual operation and maintenance expenses, including a reserve for replacements, are estimated at \$4,055,000.

The Trinity River division has engineering feasibility. No unusual construction problems are anticipated. The plan of operation is such that there will be no detrimental effect to the fishery resources or to the present and estimated future water requirements of the Trinity River Basin.

The economic and repayment studies in the Trinity River division report consider as associated features the Sacramento canals unit and a portion of the existing excess capacity in the Delta Mendota canal and the Delta Cross Channel, because these additional features are needed to put the Trinity water to beneficial use. As previously stated, a report on the Sacramento canals unit is being submitted concurrently. In my proposed report on the Sacramento canals, I do not concur in the regional director's recommendation for construction of the Mooney Island power plant, and have deleted it from the features recommended for construction in that report. Therefore, as the Trinity River division economic and financial studies include, as an associated feature, the Mooney Island power plant, this power plant should likewise be deleted from these Trinity studies. Deletion of the Mooney Island

power development from the economic study would not cause any significant change in the economic justification. The Trinity River division and associated features are economically justified, producing benefits which will exceed the costs in a ratio of about 3.1 to 1.0.

The integration of the Trinity River division operationally and financially with the existing and authorized features of the Central Valley project requires allocation and repayment studies of the enlarged project under the new operating conditions. The tentative results of these studies are summarized in the following tabulation:

Central Valley project, including Trinity River division

Function	Cost allocations	Probable repayment
Nonreimbursable:		
Navigation.....	\$18,083,000	
Flood control.....	63,444,000	
Fish and wildlife.....	503,000	
Total nonreimbursable.....	82,030,000	
Reimbursable:		
Irrigation.....	368,994,000	\$217,199,200
Commercial power.....	341,754,000	457,379,100
Municipal and industrial water service.....	8,563,000	44,732,700
Future use.....	27,403,000	27,403,000
Total reimbursable.....	746,714,000	746,714,000
Total project cost.....	828,744,000	

These results would be slightly changed by deletion of the Mooney Island power development. Also, these results were based on reimbursement from the Sacramento Canals service area of \$2.50 per acre-foot of water at canal side. Under the repayment proposal set forth in my report on the Sacramento canals the estimated reimbursement would be greater. This would improve the anticipated irrigation repayment shown in the above tabulation.

Allocations are made to future use on the basis of capacities in certain features of the existing Central Valley project which are held in reserve for anticipated future water deliveries through construction of additional units of the Central Valley project. The costs allocated to future use could be repaid by revenues from the enlarged Central Valley project herein proposed in the event that future developments, which would make use of the existing reserved capacities, are not authorized and developed.

The effect financially of adding the Trinity River division and associated features to the Central Valley project is to increase the net project revenues by about \$298,700,000 by the year 2020, or 50 years after the last power facilities have been placed in operation. These additional net revenues would be sufficient to repay the cost of the Trinity River division and the cost of the Sacramento canals unit, and leave some \$18,000,000 which could assist in retiring the costs of other increasingly expensive, yet vitally needed irrigation works that are being planned as future additions to the

Central Valley project. The above amounts would be somewhat larger with the Mooney Island power plant deleted and the repayment proposal recommended in my proposed report on the Sacramento canals incorporated.

I concur in and adopt the recommendations of the regional director as set forth in his report.

I recommend that you approve and adopt this report as your proposed report on the Trinity River division, Central Valley project (ultimate plan), California, and that you authorize me in your behalf to transmit it to the Secretary of the Army and to the States of California and Oregon in accordance with the provisions of section 1 of the Flood Control Act of 1944 (58 Stat. 887) ; to the head of the agency of the State of California exercising administration over the wildlife resources of that State, in accordance with the provisions of the Act of August 14, 1946 (60 Stat. 1080) ; and to other interested Federal agencies for their views and comments.

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved and adopted, May 2, 1952.

(Signed) OSCAR L. CHAPMAN,
Secretary of the Interior.

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D.C., November 14, 1952

THE SECRETARY OF THE INTERIOR.

SIR: On May 2, 1952, you approved and adopted my proposed report on the Trinity River division, Central Valley project, California, as the proposed report of the Department of the Interior, and authorized me to transmit copies, in your behalf, to the States of California and Oregon and to the Secretary of the Army for their views and recommendations, in accordance with the provisions of section 1 (c) of the Flood Control Act of 1944 (58 Stat. 887) ; to the State of California for the report and recommendations of the head of the agency exercising administration over the wildlife resources of that State, in accordance with the provisions of the act of August 14, 1946 (60 Stat. 1080) ; and to other interested Federal agencies for their views and comments. This action having been taken, I now submit this report, which is based on and includes the proposed report and the comments received thereon, for your consideration.

In response to the above transmittals, comments have been received from the State of Oregon, the Department of Commerce, the

Public Health Service, and the Federal Power Commission. Copies of these comments, all of which are favorable or raise no objection, are attached. Oregon's State engineer finds that Oregon's interests would not be adversely affected by this project. The Department of Commerce suggests that its planned extension of basic geodetic control into the project area might be useful to the Bureau of Reclamation in further studies. The Public Health Service comments that water supplies for local communities will not be affected, that the capacity of the Trinity River to assimilate pollution will actually be greater under project conditions, and that no major mosquito problem is expected to develop as a result of the project works. The Federal Power Commission advises that, in its opinion, the Trinity River division is feasible both from an engineering and economic point of view and that the power from the proposed plants could be fully absorbed within a few years. It does suggest that certain modifications to the plan may be found desirable as studies and detailed consideration continue, including enlargement of the Trinity Reservoir.

Comments have not been received from the State of California, the Secretary of the Army, or the Department of Agriculture. The 90-day waiting period provided by the Flood Control Act of 1944 for submittal of comments expired on August 5. The 60-day delay in sending the report forward requested by California has also expired and California has requested an additional sixty-day delay. The Central Valley project must continue to grow with the growth of the great Central Valley. As of today, the water and power needs of the area far overextend the supply. Therefore, in view of the urgent need in northern and central California for the water and electric energy which would be made available from the Trinity River division, I believe it inadvisable to longer delay action on the report and transmittal thereof to the President. If other comments are received, they will be forwarded to you.

The economic and repayment analyses of the Trinity River division include, as associated features, those works required to put to beneficial use the water made available by construction of the Trinity River division. As these associated features include the Sacramento River canals, changes in the economic and repayment analyses for the canals unit result also in changes in the economic and repayment analyses for the Trinity River division. Revised economic and repayment analyses, resulting from deleting the Mooney Island power plant from the Sacramento Canals Unit and revising the repayment plan for that unit, have been completed as substitute chapters for chapters VIII and IX of the substantiating report and are enclosed as a supplement to my proposed report.¹

The revised ratio of benefits to cost for the Trinity River division and associated features is 3.26 compared to 3.07 in my proposed report.

As the Trinity River division is to be integrated operationally and financially with the Central Valley project, the findings as to

¹ In this printed document the revised chs. VIII and IX, which constitute the supplement, have been included in the original text.

cost allocations and repayment are necessarily presented for the overall Central Valley project including the Trinity River division, and associated features. Findings, with respect to the Trinity River division, are based upon comparison of cost allocation and repayment analyses of the enlarged Central Valley project with similar analyses of the Central Valley project without the proposed enlargement. These "without" and "with" analyses are summarized in the following tabulations.

Central Valley project without Trinity River division

Function	Allocation of estimated costs	Probable repayment or return
Nonreimbursable:		
Navigation.....	\$18,083,000	
Flood control.....	63,444,000	
Fish and wildlife.....		
Total nonreimbursable.....	81,527,000	
Reimbursable:		
Irrigation.....	240,093,000	\$129,496,800
Commercial power.....	191,742,000	277,081,300
Municipal and industrial water service.....	8,924,000	34,180,900
Future use.....	26,193,000	26,193,000
Total reimbursable.....	466,952,000	466,952,000
Total project cost.....	548,479,000	

Central Valley project, including Trinity River division

Function	Allocation of estimated costs	Probable repayment or return
Nonreimbursable:		
Navigation.....	\$18,083,000	
Flood control.....	63,444,000	
Fish and wildlife.....	437,000	
Total nonreimbursable.....	81,964,000	
Reimbursable:		
Irrigation.....	369,301,000	\$216,737,500
Commercial power.....	323,088,000	439,470,800
Municipal and industrial water service.....	8,552,000	44,732,700
Future use.....	27,304,000	27,304,000
Total reimbursable.....	728,245,000	728,245,000
Total project cost.....	810,209,000	

¹ Includes the cost of the Central Valley project without the Trinity River division and the Sacramento canals unit (\$548,479,000), the cost of the Trinity River division (\$207,334,000), and the cost of the Sacramento canals (\$54,396,000).

² Expected to be repaid from water sales which cannot be provided for without authorization for additional project facilities. If the facilities are not authorized, the repayment would be made from surpluses from the presently contemplated water and power sales.

After consideration of all comments received, modifications of the Department's proposed report only with respect to the economic and repayment analyses are necessary. Accordingly, I recommend that you approve and adopt this report on the Trinity River division, Central Valley project, California, and that you transmit it, together with a copy of the attached comments, to the

President and subsequently to the Congress in accordance with the provisions of the Reclamation Project Act of 1939.

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved and adopted December 9, 1952.

(Signed) OSCAR L. CHAPMAN,
Secretary of the Interior.

See letter of transmittal to the President, December 9, 1952, on page 258.

THE WHITE HOUSE,
Washington, January 2, 1953.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: I have your report on the proposed Trinity River division addition to the Central Valley project, California. I understand that you have found the project feasible and authorized under the provisions of section 9 (a) of the Reclamation Project Act of 1939. I have no objection to your submitting it to the Congress for its consideration.

Sincerely yours,

(Signed) HARRY S. TRUMAN,
President.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D.C., January 2, 1953.

HON. SAM RAYBURN,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: In accordance with the requirements of section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187), I submit herewith my report and findings on the Trinity

River division of the Central Valley project, California. The Trinity River division consists of (1) Trinity Dam and Reservoir having a capacity of 1,800,000 acre-feet; (2) four power developments consisting of diversion dams, tunnels, and power plants having a combined installed capacity of 218,000 kilowatts; (3) a 70,000-kilowatt addition to the authorized, but not yet constructed, Delta steam electric power plant of the Central Valley project; and (4) necessary transmission and substation facilities.

Copies of my proposed report were transmitted on May 2, 1952, to the States of California and Oregon, and to the Secretary of the Army, in accordance with the provisions of section 1 (c) of the Flood Control Act of December 22, 1944 (58 Stat. 887), and to other Federal agencies represented on the Federal Interagency River Basin Committee. Copies of comments which were received from the State of Oregon, the Department of Commerce, the Public Health Service, and the Federal Power Commission are enclosed. No other comments have been received, although the 90-day period provided by the aforesaid act has long since expired.

On December 9, 1952, my report on the Trinity River division was transmitted to the President. I have been advised by the President that he has no objection to the transmittal to the Congress of my recommendations with respect to the construction of the Trinity River division as a finding of feasibility under the provisions of section 9 (a) of the Reclamation Project Act of 1939 if the facts so justify.

I find that the Trinity River division has engineering feasibility and that the estimated cost is \$207,334,000. I find also, as indicated in the report of the Commissioner of Reclamation which I approved and adopted on December 9, 1952, that the differences in the repayable and returnable allocations between the Central Valley project without the Trinity River division and the Central Valley project including the Trinity River division, together with the difference in the nonreimbursable allocation, equal the total estimated cost of the Trinity River division and associated features, which are those works required to put to beneficial use the water made available by construction of the Trinity River division. I find further that the increase in the estimated repayable and returnable allocations can probably be repaid or returned as required by the Federal reclamation laws.

The requirements of section 9 (a) of the Reclamation Project Act of 1939 and section 1 (c) of the Flood Control Act of 1944 having been met, it follows that the Trinity River division is authorized as a new division of the Central Valley project.

Sincerely yours,

(Signed) OSCAR L. CHAPMAN,
Secretary of the Interior.

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D.C., January 19, 1955.

The SECRETARY OF THE INTERIOR.

SIR: This is my proposed report on the Trinity River division, Central Valley project, California. It is based on and includes the accompanying supplemental report of the regional director, Bureau of Reclamation, Sacramento, Calif.

This report, when implemented, would modify and supplement the plan found feasible in the report of the Department of the Interior on the Trinity River division, Central Valley project, California, which was authorized by your immediate predecessor on December 9, 1952, and was transmitted to the Congress on January 2, 1953. The previous report was printed as House Document 53, 83d Congress, and the comments from the State of California on that report were printed as House Document No. 147, 83d Congress.

The Trinity River division is urgently needed to supply additional water to the Central Valley project of the Bureau of Reclamation for use in both the Sacramento and San Joaquin River Basins. The importance of early construction of the Trinity River development is emphasized by the congressional authorization of the Sacramento Valley canals as part of the Central Valley project (act of Sept. 26, 1950, 64 Stat. 1036). It is anticipated that full development of the Sacramento canals unit, which is now under construction, will require diverted Trinity River division water. This was pointed out in the Department's report on the Sacramento canals unit (H. Doc. 73, 83d Cong.) wherein it was stated that, "* * * the Trinity River diversion works are required as a physical means of providing the water supply needed over the long run for the Sacramento canals unit" (p. vii) and that "* * * the Sacramento canals unit has engineering feasibility on the basis that the Trinity River division, upon which the canals unit is dependent for a firm water supply * * * will be authorized and constructed" (p. xi). In addition the importance of imported water to the San Joaquin River basin, where large areas are experiencing an alarming drop in the ground-water table as a result of pumping, cannot be overemphasized.

The Trinity River division, in Trinity and Shasta Counties in northwestern California, consists of Trinity Dam, Reservoir, and powerplant; Lewiston diversion dam, reservoir, and powerplant; Tower House tunnel, powerplant, and diversion dam; and Matheson tunnel and powerplant. The general plan proposes the diversion of water from the Trinity River Basin into the Sacramento River Basin of the Central Valley. Trinity Reservoir on the Trinity River would be the major storage facility. Lewiston Reservoir a short dis-

tance below Trinity Reservoir would reregulate flows from Trinity Reservoir for diversion eastward through Tower House tunnel and for downstream uses especially for fish purposes. The diverted water would flow through Tower House tunnel and drop through Tower House powerplant into Clear Creek. Tower House diversion dam on Clear Creek just below the powerplant would divert water through Matheson tunnel from which it would drop through Matheson powerplant and into the existing Keswick Reservoir, Central Valley project, on the Sacramento River. These facilities and this plan are the same, except for size of some features, as the same items presented in House Document 53, 83d Congress.

The following listing comprises those facilities which in the presently proposed plan are different from the plan as previously presented to the Congress. For convenience of comparison, figures from the previous report are also set forth. All other features not listed are essentially the same.

Feature	New plan	Previous plan
Trinity Reservoir capacity.....acre-feet..	2,500,000	1,800,000
Trinity powerplant, installed capacity.....kilowatts..	90,000	75,000
Steam plant and subsidiary transmission facilities.....do.....	None	70,000

The changes in the facilities from those previously recommended resulted from additional information and suggestions made by public agencies which commented on the previous report. On an average annual basis, the somewhat expanded plan would divert 704,000 acre-feet of Trinity River water to the Sacramento River Basin which when coordinated with the Central Valley project system would provide 1,190,000 acre-feet for additional use in the Central Valley project (comparable figures for the previous plan are 660,000 acre-feet and 1,010,000 acre-feet respectively). Of this 1,190,000 acre-feet, 665,000 acre-feet would be used annually to meet the ultimate needs of 205,400 net acres in the authorized Sacramento canals unit of the Central Valley project and 525,000 acre-feet annually would be available for use on other lands in the Central Valley such as those of the potential San Luis unit of the Central Valley project. The new total installed hydroelectric power capacity would be 233,000 kilowatts, as compared to 218,000 kilowatts under old plan. It is contemplated that this larger installed capacity will increase the Central Valley project energy by 1,067 million kilowatt-hours annually.

The estimated cost of the Trinity River division based on January 1954 prices is \$219,282,000, all of which is reimbursable except \$215,000 for minimum recreation facilities which I recommend be provided at Trinity and Lewiston Reservoirs and \$47,000 for fish-protection facilities both of which would be nonreimbursable. It appears desirable also to acquire 1,200 acres of land adjacent to the reservoir areas primarily for recreation purposes and principally in connection with minimum facilities. The costs allocated

to fish protection represent the costs of specific fish-protection facilities only. Further consideration will be given to this allocation in the preparation of the definite plan report in light of the applicable policies and provisions of the act of August 14, 1946 (60 Stat. 1080). The Trinity River division would be integrated physically and financially with the Central Valley project. All reimbursable costs would be repaid within 50 years after the last feature of the division is constructed.

* * * * *

The supplementary report with its addendum presents alternative means for the development of the single-purpose power features of the Trinity River division. Either alternative, under appropriate conditions, provides for the continued expansion of irrigation as part of the Central Valley project.

In addition to my recommendation made herein concerning minimum recreation facilities, I concur in and adopt the recommendations of the regional director as set forth in paragraph 16 of his supplementary report conditional to the provision either for Federal development of the power potential or for the sale of falling water as outlined in the addendum to the supplementary report.

I recommend that you approve and adopt this report as your proposed report on the Trinity River division, which, when implemented, would modify and supplement the report printed as House Document 53, 83d Congress, and that you authorize me in your behalf to transmit copies to the State of California and to other interested agencies for their comments on the proposed modifications.

Respectfully,

(Signed) W. A. DEXHEIMER,
Commissioner.

Approved and adopted February 17, 1955.

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington, D.C., June 15, 1955.

The SECRETARY OF THE INTERIOR.

SIR: This is my report on the Trinity River division, Central Valley project, California. It is based on and includes the proposed report on this development which you approved and adopted on February 17, 1955.

Copies of your proposed report were transmitted to the States of California and Oregon and to the agencies represented on the

Inter-agency Committee on Water Resources for comments. Comments which have been received from all agencies to which the report was referred except the Department of Agriculture are attached. If and when comments from the Department of Agriculture are received they will be immediately forwarded to you for your consideration and transmittal to the Bureau of the Budget and to the Congress.

In view of the generally favorable nature of the comments received, it does not appear that revision of your proposed report, as a result of review by the various agencies, is necessary. In particular, officials of the State of California, while indicating reservation in respect to some aspects of the physical and financial plan presented and recommending that legislation be sufficiently broad to permit revision of physical features, expressed the opinion that the Trinity River division should be developed and that it should be constructed at the earliest possible practicable date.

Since your approval of my proposed report on February 17, 1955, further negotiations with the Pacific Gas & Electric Co. in respect to the sale of falling water have been in progress. It is clear, however, that the Trinity River division will be a sound, economically feasible addition to the Central Valley project regardless of whether a Federal or non-Federal organization constructs the power features and there appears to be no reason why authorization and initiation of construction should be delayed pending a decision.

Accordingly, I recommend that the Trinity River division be reauthorized substantially in accordance with the plan presented in this report, so that construction may be undertaken as soon as practical on those works which can be built while further consideration is given to the possibilities and desirability of non-Federal construction of the hydroelectric power features. I recommend further that you approve and adopt this report as your report on the Trinity River division, Central Valley project, California, and that you transmit it together with the attached comments to the President, and subsequently to the Congress, in accordance with the provisions of the Reclamation Project Act of 1939.

Respectfully,

(Signed) E. G. NIELSEN,
Acting Commissioner.

Approved and adopted July 12, 1955.

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D.C., July 12, 1955.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget.)

MY DEAR MR. PRESIDENT: My report on the Trinity River division, Central Valley project, California, is transmitted herewith pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

This report modifies and brings up-to-date the plan found feasible in the report of the Department of the Interior on the Trinity River division, which was sent to the Congress on January 2, 1953, and was printed as House Document No. 147, 83d Congress. The general plan as previously presented remains essentially the same. However, certain facilities would be enlarged and a slightly greater amount of water would be provided for use in the Central Valley Basin.

More than 1,100,000 acre-feet of additional water that would be made available in the Sacramento and San Joaquin Basins as a result of diverting from the Trinity River is urgently needed to supplement existing supplies. Main project facilities proposed consist of Trinity Dam, Reservoir, and powerplant; Lewiston diversion dam, reservoir, and powerplant; Tower House tunnel, powerplant, and diversion dam; and Matheson tunnel and powerplant. The general plan provides for the regulation of Trinity River flows and diversion of Trinity River water through the tunnels to the Sacramento River Basin. The difference in elevation between the Trinity and Sacramento Rivers will provide an excellent opportunity for the generation of electric power and energy which also would make an important contribution to the economic welfare of the area.

The single-purpose power facilities could be constructed by a Federal or non-Federal agency. The enclosed² addendum report discusses the sale of falling water for non-Federal development of the hydroelectric power and energy. The addendum outlines the possibility of a partnership arrangement for the construction of this project. Legislation to authorize such construction should be broad enough so that the Secretary of the Interior would be authorized by the provisions of the bill to negotiate a contract for sale of falling water which would be associated with the construction of power facilities by a non-Federal agency, and to complete and put into effect such a contract if it can be negotiated satisfactorily. If construction of the project were to be so authorized, it would

² Enclosures excluded from this publication.

be possible for work on this addition to the Central Valley project to proceed without delay while the partnership contract is being negotiated.

The estimated cost of the proposed Trinity River division based on January 1954 prices, which are closely comparable to present prices, is \$219,282,000 all of which is reimbursable except \$215,000 for minimum recreation facilities and \$47,000 for fish protection facilities. All reimbursable costs would be returned to the Federal Treasury within 50 years after the last feature is constructed. The development is economically justified with a benefit-cost ratio well in excess of unity. The proposal has the strong support of local interests and of California State officials.

Copies of the proposed report of this Department were transmitted to the States of California and Oregon and to the agencies represented on the Interagency Committee on Water Resources for comments. All agencies except the Department of Agriculture to whom the report was sent have submitted comments and copies are enclosed³ with the report. If and when additional comments are received they will be forwarded to you immediately and ultimately sent to the Congress.

I shall appreciate having advice concerning the relationship of the Trinity River division, Central Valley project, California, to your program before I transmit the report to the Congress for its consideration and appropriate action, in accordance with the provisions of the Reclamation Act of 1939.

Sincerely yours,

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

³ Enclosures excluded from this publication.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D.C., November 1, 1955.

HON. SAM RAYBURN,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: My report on the Trinity River division, Central Valley project, California, is transmitted herewith pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187). This report supplements the report of the Department of the Interior on the Trinity River division which was printed as House Document 147, 83d Congress. The proposed addition to the Central Valley project described in the attached report was authorized by Public Law 386, 84th Congress.

The general plan, which is similar to that presented in House Document 147, is to divert water from the Trinity River to the Sacramento River Basin in California. As a result, Central Valley project water supplies would be increased by over a million acre-feet. Along the diversion route hydroelectric power would be generated by taking advantage of the difference in elevation of the two river basins.

The estimated cost, if fully developed by the Federal Government, is \$219,282,000 based on January 1954 prices which are essentially the same as current prices. If the power facilities are developed by a non-Federal agency, as discussed in the enclosures, the total Federal investment would be reduced. In accordance with the authorizing legislation, studies are currently under way to determine necessary additional details concerning non-Federal development of the hydroelectric potential.

Copies of this Department's proposed report were transmitted to the States of California and Oregon, and to the agencies represented on the Interagency Committee on Water Resources for comments. Comments have been received from all to which the report was sent and copies are enclosed.⁴

The report and copies of all comments were transmitted to the President. Enclosed is a copy of the letter of comments of September 29, 1955, from Assistant Budget Director Percy Rappaport.

Sincerely yours,

(Signed) FRED G. AANDAHL,
Acting Secretary of the Interior.

⁴ Enclosures excluded from this publication.

An act to authorize the Secretary of the Interior to construct, operate, and maintain the Trinity River division, Central Valley project, California, under Federal reclamation laws. (Act of August 12, 1955, 69 Stat. 719, Public Law 386, 84th Cong., 1st sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the principal purpose of increasing the supply of water available for irrigation and other beneficial uses in the Central Valley of California, the Secretary of the Interior, acting pursuant to the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto), is authorized to construct, operate, and maintain, as an addition to and an integral part of the Central Valley project, California, the Trinity River division consisting of a major storage reservoir on the Trinity River with a capacity of two million five hundred thousand acre-feet, a conveyance system consisting of tunnels, dams, and appurtenant works to transport Trinity River water to the Sacramento River and provide, by means of storage as necessary, such control and conservation of Clear Creek flows as the Secretary determines proper to carry out the purposes of this Act, hydroelectric powerplants with a total generating capacity of approximately two hundred thirty-three thousand kilowatts, and such electric transmission facilities as may be required to deliver the output of said powerplants to other facilities of the Central Valley project and to furnish energy in Trinity County: *Provided*, That the Secretary is authorized and directed to continue to a conclusion the engineering studies and negotiations with any non-Federal agency with respect to proposals to purchase falling water and, not later than eighteen months from the date of enactment of this Act, report the results of such negotiations, including the terms of a proposed agreement, if any, that may be reached, together with his recommendations thereon, which agreement, if any, shall not become effective until approved by Congress. The works authorized to be constructed shall also include a conduit or canal extending from the most practicable point on the Sacramento River near Redding in an easterly direction to intersect with Cow Creek, with such pumping plants, regulatory reservoirs, and other appurtenant works as may be necessary to bring about maximum beneficial use of project water supplies in the area.

SEC. 2. Subject to the provisions of this Act, the operation of the Trinity River division shall be integrated and coordinated, from both a financial and an operational standpoint, with the operation of other features of the Central Valley project, as presently authorized and as may in the future be authorized by Act of Congress, in such manner as will effectuate the fullest, most beneficial, and most economic utilization of the water resources hereby made available: *Provided*, That the Secretary is authorized and directed to adopt appropriate measures to insure the preservation and propagation of fish and wildlife, including, but not limited to, the maintenance of the flow of the Trinity River below the diver-

sion point at not less than one hundred and fifty cubic feet per second for the months July through November and the flow of Clear Creek below the diversion point at not less than fifteen cubic feet per second unless the Secretary and the California Fish and Game Commission determine and agree that lesser flows would be adequate for maintenance of fish life and propagation thereof; the Secretary shall also allocate to the preservation and propagation of fish and wildlife, as provided in the Act of August 14, 1946 (60 Stat. 1080), an appropriate share of the costs of constructing the Trinity River development and of operating and maintaining the same, such costs to be non-reimbursable: *Provided further*, That not less than 50,000 acre-feet shall be released annually from the Trinity Reservoir and made available to Humboldt County and downstream water users.

SEC. 3. The Secretary is authorized to investigate, plan, construct, operate, and maintain minimum basic facilities for access to, and for the maintenance of public health and safety and the protection of public property on, lands withdrawn or acquired for the development of the Trinity River division, to conserve the scenery and the natural, historic, and archeologic objects, and to provide for public use and enjoyment of the same and of the water areas created by these developments by such means as are consistent with their primary purposes. The Secretary is authorized to withdraw from entry or other disposition under the public land laws such public lands as are necessary for the construction, operation, and maintenance of said minimum basic facilities and for the other purposes specified in this section and to dispose of such lands to Federal, State, and local governmental agencies by lease, transfer, exchange, or conveyance upon such terms and conditions as will best promote their development and operation in the public interest. The Secretary is further authorized to investigate the need for acquiring other lands for said purposes and to report thereon to the Committees on Interior and Insular Affairs of the Senate and House of Representatives, but no lands shall be acquired solely for any of these purposes other than access to project lands and the maintenance of public health and safety and the protection of public property thereon without further authorization by the Congress. All costs incurred pursuant to this section shall be nonreimbursable and nonreturnable.

SEC. 4. Contracts for the sale and delivery of the additional electric energy available from the Central Valley project power system as a result of the construction of the plants herein authorized and their integration with that system shall be made in accordance with preferences expressed in the Federal reclamation laws: *Provided*, That a first preference, to the extent of 25 per centum of such additional energy, shall be given, under reclamation law, to preference customers in Trinity County, California, for use in that county, who are ready, able and willing, within twelve months after notice of availability by the Secretary, to enter into contracts for the energy: *Provided further*, That Trinity County preference customers may exercise their option on the same date in each successive fifth year providing written notice

of their intention to use the energy is given to the Secretary not less than eighteen months prior to said date.

SEC. 5. The Secretary is authorized to make payments, from construction appropriations, to Trinity County, California, of such additional costs of repairing, maintaining, and constructing county roads as are incurred by it during the period of actual construction of the Trinity River division and as are found by the Secretary to be properly attributable to and occasioned by said construction. The Secretary is further authorized and directed to pay to Trinity County annually an in-lieu tax payment out of the appropriations during construction and from the gross revenues of the project during operation an amount equal to the annual tax rate of the county applied to the value of the real property and improvements taken for project purposes in Trinity County, said value being determined as of the date such property and improvements are taken off the tax rolls. Payments to the public-school districts in the project area affected by the construction activities shall be made pursuant to existing law.

SEC. 6. There are hereby authorized to be appropriated for construction of the Trinity River division \$225,000,000, plus or minus such amounts, if any, as may be justified by reason of ordinary fluctuations in construction costs as indicated by engineering cost indexes applicable to the type of construction involved herein, and, in addition thereto, such sums as may be required to carry out the provisions of section 5 of this Act and to operate and maintain the said development.

WATERFOWL MANAGEMENT

An act to authorize works for development and furnishing of water supplies for waterfowl management, Central Valley project, California, and for other purposes. (Act of August 27, 1954, 68 Stat. 879, Public Law 674, 83d Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the entire Central Valley project, California, heretofore authorized under the Act of August 26, 1937 (50 Stat. 844, 850), and reauthorized under the Act of October 17, 1940 (54 Stat. 1198, 1199), the Act of October 14, 1949 (63 Stat. 852), and the Act of September 26, 1950 (64 Stat. 1036), is hereby reauthorized and declared to be for the purposes set forth in said Acts, and also for the use of the waters thereof for fish and wildlife purposes, subject to such priorities as are applicable under said Acts.

SEC. 2. The Secretary of the Interior is authorized to construct, operate, and maintain such works on waterfowl management areas and refuges owned and operated by the State of California or the United States as may be necessary or desirable for the development of a water supply by means of wells and the re-

covery of drainage, and to furnish water available from such works, and water available from Central Valley project sources, for wildlife management purposes substantially in accordance with the recommendations set forth in the report of the United States Department of the Interior entitled "Waterfowl Conservation in the Lower San Joaquin Valley, Its Relation to the Grasslands and the Central Valley Project," dated October 1950, and such works should be developed in cooperation with the State of California.

SEC. 3. The cost of investigation, planning, and construction of the works and the delivery of water as authorized in section 2 of this Act shall not be reimbursable or returnable under the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and the Acts amendatory thereof and supplementary thereto).

SEC. 4. There are hereby authorized to be appropriated such funds, not to exceed \$400,000, for construction of necessary works to supply water for State and federally owned and operated waterfowl management areas in the San Joaquin Valley to carry out the purposes of this Act.

SEC. 5. Works constructed under the authorization of section 2, for the purpose of supplying State wildlife management areas with water, shall become the property of the State of California when constructed.

SEC. 6. The Secretary of the Interior is authorized to contract for the delivery of water to public organizations or agencies for use within the boundaries of such organizations or agencies for waterfowl purposes in the Grasslands area of the San Joaquin Valley. If and when available, such water shall be delivered from the Central Valley project at a charge not to exceed the prevailing charge for class 2 water.

SEC. 7. The use of all water furnished by the Secretary of the Interior under section 2 and section 6 of this Act shall be subject to and not inconsistent with the laws of the State of California relating to priorities of deliveries and use of water. Nothing contained in this Act shall be construed as an allocation of water.

CORPS OF ENGINEERS DAMS

TABLE MOUNTAIN (IRON CANYON), FOLSOM, KINGS
RIVER, AND KERN RIVER AUTHORIZATION FOR
U. S. CORPS OF ENGINEERS.

[Extract from] An act authorizing the construction of certain public works on rivers and harbors for flood control, and for other purposes. (Act of December 22, 1944, 58 Stat. 887, 900, 901, Public Law 534, 78th Cong., 2d sess.)

* * * * *

SACRAMENTO-SAN JOAQUIN RIVER BASIN

Sacramento River

The projects for the control of floods and other purposes on the Sacramento River, California, adopted by the Acts approved March 1, 1917, May 15, 1928, August 26, 1937, and August 18, 1941, are hereby modified substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 649, Seventy-eighth Congress, second session, at an estimated cost of \$50,100,000; and in addition to previous authorizations there is hereby authorized to be appropriated the sum of \$15,000,000 for the prosecution of the modified projects: *Provided*, That this modification of the project shall not be construed to authorize the construction of a high dam at the Table Mountain site but shall authorize only the low-level project to approximately the elevation of four hundred feet above mean sea level, said low-level dam to be built on a foundation sufficient for such dam and not on a foundation for future construction of a higher dam.

The project for the Folsom Reservoir on the American River, California, is hereby authorized substantially in accordance with the plans contained in House Document Numbered 649, Seventy-eighth Congress, second session, with such modifications thereof as in the discretion of the Secretary of War and the Chief of Engineers may be advisable, at an estimated cost of \$18,474,000.

San Joaquin River

The project for the Isabella Reservoir on the Kern River for flood control and other purposes in the San Joaquin Valley, California, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in his report dated

January 26, 1944, contained in House Document Numbered 513, Seventy-eighth Congress, second session, at an estimated cost of \$6,800,000.

* * * * *

The project for flood control and other purposes for the Kings River and Tulare Lake Basin, California, is hereby authorized substantially in accordance with the plans contained in House Document Numbered 630, Seventy-sixth Congress, third session, with such modifications thereof as in the discretion of the Secretary of War and the Chief of Engineers may be advisable at an estimated cost of \$19,700,000; *Provided*, That the conditions of local cooperation specified in said document shall not apply: *Provided further*, That the Secretary of War shall make arrangements for payment to the United States by the State or other responsible agency, either in lump sum or annual installments, for conservation storage when used: *Provided further*, That the division of costs between flood control, and irrigation and other water uses shall be determined by the Secretary of War on the basis of continuing studies by the Bureau of Reclamation, the War Department, and the local organizations.

KERN RIVER PROJECT

The Kern River project was authorized to be constructed by the Corps of Engineers. The appropriation act of June 29, 1948, appropriated the sum of \$42,500 to the Bureau of Reclamation for the purpose of making studies to establish the allocation of the capital cost of the project to its various functions and develop a base upon which a repayment contract can be negotiated.

BUREAU OF RECLAMATION,
Washington, October 4, 1940.

CHIEF OF ENGINEERS,
War Department, Washington, D.C.

DEAR SIR: Reference is made to your letter of March 30 and subsequent correspondence, relative to the report of the Corps of Engineers on a flood-control project in the Kern River Valley in California.

The proposed development involves the construction of the

Isabella Reservoir to a capacity of 550,000 acre-feet at a total estimated cost of \$6,800,000. According to the report, the development will conserve 87,500 acre-feet of water for additional irrigation use in the Kern River area annually. The value of this additional water is placed at \$153,000 a year. The report also states that the stream regulation resulting from the proposed construction will effect an increase in power output at the existing hydro plants on the Kern River, the annual value of which is estimated at \$32,000.

The report proposes that the local irrigation interests shall be required to contribute one-third of the construction cost of the reservoir less an allowance of \$425,000 for the operation and maintenance of the project, and that they shall operate the reservoir and outlet works in accordance with regulations prepared by the Secretary of War.

The Bureau of Reclamation is constructing the Friant Dam and Reservoir on the San Joaquin River as one of the principal features of the Central Valley project. It also proposes to construct the Friant-Kern Canal for the purpose of supplementing the water supply of the Kern River area with water stored at the Friant Reservoir.

The State water plan for the Central Valley of California, as prepared by the California State engineers, included the construction of the Friant Dam and Reservoir and Friant-Kern Canal, as now being undertaken by the Bureau of Reclamation and the construction of the Isabella Reservoir. Their reports also indicate that there are several reservoir sites on the Kern River suitable for storage and power development.

The development of the Isabella Reservoir, with the resulting increase in the amount of water available for irrigation use, and that of the Friant Division of the Central Valley project, now under construction by the Bureau of Reclamation, are very closely related to each other. It is not apparent that this relationship was studied by the district engineer.

The flood hazards in the Kern River Basin and the need of furnishing supplemental water to the service area have been recognized by the Bureau for some time. As the Isabella Reservoir site is probably the cheapest storage on the Kern River the Bureau of Reclamation does not object to its construction as a flood-control measure. In fact, it is believed that the work is highly desirable.

However, the Bureau is of the opinion that actual construction of the Isabella Dam should be preceded by investigations of the relationship between the flood-control project and the Central Valley project. A thorough study should also be made of possible upstream storage and power sites, as storage at these sites may have some effect on the desirable capacity of the Isabella Reservoir. Further studies should also be made of the power potentialities at the Isabella site.

In this connection it may be stated that the Bureau is now engaged in location surveys for the Friant-Kern Canal and is making an investigation of the irrigation requirements in the Kern River Valley. This latter study will correlate all information

available in connection with the flood-control project and the Central Valley project, as well as an examination of upstream storage and power potentialities at the Isabella site.

The engineers of the Bureau of Reclamation do not believe that a proper allocation of cost of constructing the Isabella Reservoir can be made until the surveys now in progress by the Bureau have been completed, as these studies are necessary to determine the relative value and cost of the supplemental water which may be supplied to the valley through the construction of the two projects. The examination now in progress by the Bureau of Reclamation and the report of the Board of Engineers for Rivers and Harbors should be reviewed jointly by the two agencies in order to determine more accurately the benefits and cost allocations to the various interests which will be served by the project.

The execution of contracts with the interests participating in the irrigation benefits of the project should be a prerequisite to the completion of the reservoir. The engineers of the Bureau are of the opinion that the repayment of that part of the construction cost of the flood-control project allocated to irrigation should be computed and stated in accordance with the terms of the Reclamation Act and its amendments and other acts pertaining to the reclamation of lands in the arid West, that is, repayment of the reimbursable portions of the construction cost, allotted to irrigation, in 40 years, without interest, instead of a lump sum as is provided in the report of the Corps of Engineers.

Very truly yours,

(Signed) H. W. BASHORE,
Acting Commissioner.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ENGINEERS,
Washington, January 26, 1944.

To: The SECRETARY OF WAR.
Subject: Kern River, Calif.

1. This report on preliminary examination and survey of the Kern River, Calif., is made under authority of the Flood Control Act approved June 22, 1936, which provides for a preliminary examination and survey of the "Sacramento and San Joaquin River Valleys, Calif." Separate reports are being made on other areas in the two watersheds.

* * * * *

9. The reports of the Board of Engineers for Rivers and Harbors and of the district and division engineers were referred to the Federal Power Commission and to the Bureau of Reclamation

for review and comments. In reply, copy herewith, the Federal Power Commission states as its conclusions that a multiple-purpose reservoir at the Isabella site is a desirable element in a plan to develop comprehensively the water resources of Kern River; that its construction should be authorized; that before actual construction is commenced further study should be made of the method of reservoir operation, the provisions for power development at the site, and the relation of the improvement to the Borel power development and to other power plants downstream; and that the authorizing legislation should contain a provision with respect to determination of, and collection of payments for, benefits to downstream power plants.

10. In commenting upon the report the Bureau of Reclamation by letter of October 4, 1940, copy herewith, advised that it believed the construction of the Isabella Reservoir as a flood-control measure to be highly desirable and stated that it was making an investigation of the irrigation requirements in the Kern River Valley. Subsequently the Bureau has submitted to the Flood Control Committee of the House of Representatives, a Summary Report on San Joaquin Valley—Streams Tributary to Tulare Lake, dated August 1943, which briefly covers its investigations of Kern River. Therein, it recommends the construction of Isabella Reservoir to provide the 550,000 acre-feet of storage found advisable by the Board of Engineers for Rivers and Harbors. The Bureau estimates the direct irrigation benefits and reduction in direct flood damages at \$410,500 annually and \$262,000 annually, respectively, and that the reservoir will enhance the value of the output of existing power plants by about \$68,000 annually. However, its report states that studies concerning the value of conserved water to irrigation and the allocation of benefits to the general public and to local interests have not been entirely completed and expresses the view that the studies of these questions should be continued by the Department of the Interior, the War Department, and local interests, cooperatively, to determine fair charges for the conservation water and in order that repayment thereof may be provided for in accordance with the Reclamation Act. The Bureau advocates construction of the reservoir by the Federal Department having the major interest in it and thereafter placing the improvement in charge of the Department of the Interior for operation and maintenance, its irrigation features being related to those of the Central Valley project.

11. After due consideration I concur in the views of the Board that the Isabella Reservoir should be constructed for flood control and water conservation and that 100,000 acre-feet of the proposed storage space should be initially reserved for exclusive use for flood control until such time as experience or further studies may indicate that this space can also be used for other beneficial purposes. The estimates of benefits made by the district engineer, the Board of Engineers for Rivers and Harbors, and the Bureau of Reclamation all show clear economic justification for the expenditures required for the improvement.

12. The district engineer in his report and in recent supple-

mental studies finds that flood-control benefits are about four times the combined benefits to irrigation and power. Recent reports made by competent engineers engaged by the local interests also show that flood-control benefits greatly exceed the benefits resulting from use of the stored water. As mentioned above the Bureau of Reclamation now estimates irrigation benefits at more than flood-control benefits but states that its studies are not entirely completed. On the basis of all available information I consider the Isabella Reservoir predominantly a flood-control project and urgently needed to meet a serious present flood hazard. Authorization at this time will permit preparation of plans for prompt construction when national conditions permit.

* * * * *

14. In accordance with the policy indicated by existing legislation the cost of the Isabella Reservoir should be borne jointly by the United States and the water users, the United States bearing the cost for flood protection and the water users the cost for irrigation, with proper payment for power benefits as discussed in the preceding paragraph. The exact manner of use of the storage for irrigation purposes will be influenced by future developments in the area and must take cognizance of existing and future water rights established by State law and of the desires of the local interests owning such rights. Continuing studies by the Bureau of Reclamation, this Department, and the local organizations will establish the best plan of operation and appropriate cost allocations. Under these conditions it is considered appropriate that provision be made for the construction of the reservoir with Federal funds, and that after completion and when use thereof is made conservation interests be required to pay the United States for the beneficial use of the conservation capacity, either in lump sum or annual installments.

* * * * *

16. I recommend construction of Isabella Reservoir on Kern River, Calif., for flood control and other purposes, generally in accordance with the plans of the district engineer and my comments herein, and with modifications thereof as in the discretion of the Secretary of War and Chief of Engineers may be advisable, at an estimated first cost of \$6,800,000 and \$30,000 annually for maintenance and operation.

(Signed) E. REYBOLD,
Major General, Chief of Engineers.

PROVISIONS OF INTERIOR DEPARTMENT APPROPRIATION ACT, 1949

[Extracts from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1949, and for other purposes. (Act of June 29, 1948, 62 Stat. 1112, 1128-1129, Public Law 841, 80th Cong., 2d sess.)

* * * That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, for the Department of the Interior for the fiscal year ending June 30, 1949, namely:

* * * * *

GENERAL FUND, CONSTRUCTION

For continuation of construction of the following projects in not to exceed the following amounts to be immediately available, to remain available until expended for carrying out projects (including the construction of transmission lines) previously or herein authorized by Congress, and to be reimbursable (except as otherwise provided by law) under the reclamation law:

* * * * *

Kern River project, California, \$42,500.

KINGS RIVER PROJECT

The Kings River project was found feasible and authorized by the Secretary on January 24, 1940, under the provisions of the Reclamation Act of 1939. The Congress subsequently authorized the project for construction by the Corps of Engineers, and the Pine Flat Dam and reservoir were constructed by that agency. Funds in the amount of \$100,000 were provided in the Interior Appropriation Act for fiscal year 1947 for the Bureau of Reclamation to negotiate with the water users for repayment for irrigation storage in Pine Flat Reservoir.

BUREAU OF RECLAMATION,
Washington, January 23, 1940.

The SECRETARY OF THE INTERIOR.

SIR: I am transmitting the report of the Bureau of Reclamation on the Kings River project in California, prepared after careful investigation of the project and consultation with the Corps of Engineers of the War Department, which is making a similar report. There is appended a tabulation presenting descriptive and factual data on the project. The Bureau report contemplates a storage project for supplemental irrigation water on about 800,000 acres of developed land, and for flood control and power development. The report of the Chief of Engineers, War Department, omits power development, which the Bureau considers essential to the proper and most beneficial utilization of conserved waters.

Both reports recommend allocating one-half the cost of the reservoir to flood control. The Bureau report contemplates repayment of construction costs allocated to irrigation in the amount of \$9,750,000, in 40 years without interest, requiring annual construction installments of \$243,750. The Chief of Engineer's report proposes a lump-sum payment by irrigation interests upon completion of construction of \$5,200,000, which amount, if borrowed, and retired in 40 years with interest at 3½ percent, results in annual costs to the irrigators equivalent to the Bureau plan.

In this project irrigation and power combined exceed flood control, both as to costs and benefits. Since navigation is not involved, and the flood damage to be eliminated is almost wholly local, as also are the anticipated flood control benefits, the project is more one for irrigation than for flood control.

The Chief of Engineers proposes that all operation and maintenance of the project be perpetually performed by local interests at their own expense and that a reduction of the local contribution to the extent of \$400,000 be made in compensation for operation and maintenance costs chargeable to flood control. In my opinion, the complexities of irrigation uses, the potentially conflicting interests of irrigation and flood control, the coordination of power production by the Kings River and Central Valley projects, and the prospect of the sale of water from the Central Valley project to portions of the Kings River service area, make it highly advisable for the Government to operate the contemplated Kings River project works, leaving the operation of the canals and the distribution of water in local hands. Water releases, except in rare cases, must conform to vested irrigation rights.

In the circumstances, I believe that the project, if and when undertaken, should be constructed and operated by the Bureau

of Reclamation because of the preponderance of irrigation and agricultural use. The development is greatly desired by the people of this thickly settled area which it would admirably serve. No new lands are to be developed. The benefits far exceed the costs. The project is desirable, and clearly meets all requirements of feasibility and authorization under section 9 of the Reclamation Act of 1939. I recommend that a finding of feasibility, together with the report, be submitted to the President and to the Congress in compliance with that act.

Respectfully,

(Signed) JOHN C. PAGE,
Commissioner.

THE SECRETARY OF THE INTERIOR,
Washington, January 24, 1940.

THE PRESIDENT,
The White House,
(Through the National Resources Planning Board).

MY DEAR MR. PRESIDENT: There is transmitted a letter of January 23, 1939, from the Commissioner of Reclamation, submitting a report on the Kings River project of California, contemplating an expenditure of \$22,300,000 for the Pine Flat Reservoir on Kings River with a capacity of 1,000,000 acre-feet and a power plant, to provide supplemental irrigation water, flood control, and a power supply for an area of about 800,000 acres of developed lands around Fresno, Calif., together with minor river-control works. Through consultation and agreement with the Chief of Engineers, representing the Secretary of War, \$9,950,000 of this cost has been allocated to flood control, with no reimbursement contemplated. To irrigation there would be allocated \$9,750,000 to be repaid under the reclamation law in 40 years without interest. A power investment of \$2,600,000 would be repaid in 40 years with interest at 3½ percent, from power sales.

The proposed allocation of costs is proper and equals the estimated cost of the project. The repayment of reimbursable costs can be anticipated with assurance. I find the project desirable, economically and engineeringly feasible, and authorized for construction under the provisions of section 9 of the Reclamation Act of 1939. I therefore recommend its construction thereunder, if and when funds are made available.

Unless you have objections thereto, the letter and report will be transmitted to the Congress, in accordance with the provisions of that law.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE,
Washington, February 10, 1940.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: I have your letter of January 24 which was your finding with respect to the Kings River project in California and with which you submitted the Reclamation report on the project.

I am returning your letter and its enclosures. You may transmit the report to the Congress.

Sincerely yours,

(Signed) FRANKLIN D. ROOSEVELT,
President.

THE SECRETARY OF THE INTERIOR,
Washington, February 10, 1940.

Hon. WILLIAM B. BANKHEAD,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: I am transmitting herewith the Reclamation report on the Kings River Project in California.

The letter of January 23, 1940, to me from Commissioner John C. Page, of the Bureau of Reclamation, states that, "The project is desirable, and clearly meets all requirements of feasibility and authorization under section 9 of the Reclamation (Project) Act of 1939."

My letter to the President dated January 24, 1940, states that, "The proposed allocation of costs is proper and equals the estimated cost of the project. The repayment of reimbursable costs can be anticipated with assurance. I find the project desirable, economically and engineeringly feasible, and authorized for construction under the provisions of section 9 of the Reclamation (Project) Act of 1939. I therefore recommend its construction thereunder, if and when funds are made available."

These letters, together with a letter from the President approving transmittal of the report to the Congress, are attached and are a part of the report, the main body of which, separately bound, also is enclosed. These enclosures constitute the report, the findings, and the authorization contemplated in section 9 of the Reclamation Project Act of 1939 on the Kings River Project, California.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

PROVISIONS OF INTERIOR DEPARTMENT APPROPRIATION ACT, 1947

[Extracts from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1947, and for other purposes. (Act of July 1, 1946, 60 Stat. 348, 367, Public Law 478, 79th Cong., 2d sess.)

* * * That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, for the Department of the Interior for the fiscal year ending June 30, 1947, namely:

* * * * * *

GENERAL FUND, CONSTRUCTION

For continuation of construction of the following projects in not to exceed the following amounts to be immediately available, to remain available until expended for carrying out projects (including the construction of transmission lines) previously or herein authorized by Congress, and to be reimbursable under the Reclamation law:

* * * * * *

Kings River project, California, \$100,000.

CHIEF JOSEPH DAM PROJECT

WASHINGTON

FOSTER CREEK DIVISION

The Foster Creek Division of Chief Joseph Dam Project was approved by the Secretary of the Interior on January 7, 1954, and authorized by Act of Congress on July 27, 1954. (Public Law 540, 83d Congress., 2d sess., 68 Stat. 568.)

UNITED STATES DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D. C., December 21, 1953.

The SECRETARY OF THE INTERIOR.

SIR: This is my report covering a study of the potential irrigation possibilities in the vicinity of the Chief Joseph Dam, Wash. It is based on and includes, except as hereinafter modified, the proposed report on this project which you approved and adopted on July 13, 1953.

Copies of your proposed report were transmitted to the States of the Columbia River Basin and to the Secretary of the Army in accordance with provisions of section 1 (c) of the Flood Control Act of 1944 (58 Stat. 887), and to the State of Washington for comments of the head of the agency exercising administration over the wildlife resources of that State in accordance with the provisions of the act of August 14, 1946 (60 Stat. 1080). Copies of the report were sent also to the agencies represented on the Federal Interagency River Basin Committee for their comments. Attached are the replies received from the States of Idaho, Montana, Washington, and Wyoming and the six Federal agencies to which the report was sent.

In general, the comments received are favorable to the proposed development. Officials of the State of Washington in which the

project is located approve the report and request everything possible be done to obtain immediate authorization.

The proposed report treated the general plan for irrigation in conjunction with Chief Joseph Dam and specifically recommended the immediate authorization of several divisions. The proposed report is hereby modified to eliminate from the plan the Indian lands in the several divisions recommended for authorization. This action stems from a request by the Bureau of Indian Affairs that such lands not be included in the project. The possibility of such action was discussed in the proposed report.

Briefly, the revision leaves the plans for serving the Bridgeport Bar division and the Bluebottle Flat unit unchanged although in the latter case a minor change in cost results from a reallocation of the costs of the jointly used power facilities. All units of the East Canal division except Brewster Flat are deleted from the plan and the East Canal division is renamed the Brewster Flat division. The plan for serving Brewster Flat is changed with regard to source of water supply and location of pumping plant. The revised plan is discussed in greater detail below.

The deletion of the Indian lands necessitates changes in certain aspects of the project and extensive but in most cases relatively minor changes in figures presented in the proposed report for both the divisions recommended for immediate authorization and construction and for the overall potential irrigation possibilities. These changes are discussed in the order of their occurrence in the proposed report.

The Brewster Flat division would serve water to the same acreages as would the original Brewster Flat unit, that is, a new or full supply to 3,000 acres and a supplemental supply to 130 acres. With this division substituted for the East Canal division the totals for the irrigation potentialities for the overall development become: new lands, 34,650 acres; supplemental water, 40,835 acres.

Based upon the revisions in the project plan and recent estimates the construction cost for the potential irrigation developments would be about \$33 million of which approximately \$11,200,000 probably could be returned by the water users in 50 years. Thus, financial assistance required from power would be about \$21,800,000 or \$436,000 annually for 50 years.

The elimination of the Indian units makes the plan in the proposed report for serving Brewster Flat lands, via the East Canal, less attractive and an alternative and more favorable plan for serving these lands is adopted. The new plan proposes that the water supply be pumped from the Columbia River a short distance below the mouth of the Okanogan River in sec. 18, T. 30 N., R. 25 E. The discharge line would extend north along the east line of secs. 7 and 6 to a point near the southwest corner of sec. 32, T. 31 N., R. 25 E., elevation about 1,275. From this point the main canal would extend in a northeasterly direction paralleling the lateral shown on drawing 586-120-37 in the report. The main canal would thus replace about 2 miles of lateral canal, including the siphons located in secs. 28 and 32. The section of main canal

between the previously proposed pumping plant discharge and the siphon in sec. 28 would become a minor lateral.

The changed plan results in the elimination of the Monse gravity unit comprising 270 acres and the units made up of Indian lands (2,750 acres) and results in acreage figures for the initial divisions of 4,550 to receive a new water supply and 1,130 to receive supplemental and replacement water.

Based on October 1952 prices the revised cost estimate for the initially recommended divisions is \$4,798,100. This amount includes \$40,800 of the cost of the Chief Joseph Dam and Reservoir which is allocated to irrigation. The funded operation and maintenance cost, which is also included in the above amount, becomes \$311,300. Of the above estimated cost, the water users probably could return \$1,722,000 in 50 years. The attached table contains a summary of the revised repayment study.

The changes in cost necessitate revisions in the economic analysis. New calculations show a small reduction in the benefit-cost ratio; however, the initial divisions remain economically justified with benefits well in excess of costs.

After consideration of all comments received from reviewing States and agencies, I recommend that your proposed report be modified only as discussed above. The Department of Agriculture's comments on the proposed report contained statements which we believed warranted additional discussion and clarification. A copy of our letter of reply to the Department of Agriculture is attached to the letter of comments from that agency.

Accordingly, I recommend that you approve and adopt the report which you approved on July 7, 1953, as modified by this letter, as your report on the Chief Joseph Dam project (general irrigation potentials and initial divisions) and that you transmit it, together with the attached comments, to the President and, subsequently, to the Congress in accordance with the provisions of the Reclamation Project Act of 1939, and the act of July 17, 1952.

Respectfully,

(Signed) W. A. DEXHEIMER,
Commissioner.

Approved and adopted: January 7, 1954.

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

UNITED STATES DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington D. C., January 7, 1954.

THE PRESIDENT,
The White House.
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: My report concerning potential irrigation in the vicinity of the Chief Joseph Dam Project, Washington, is transmitted herewith pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187, 1193) and the act of July 17, 1952 (66 Stat. 753). The latter act, in effect, supplements section 8 of the Flood Control Act of 1944 (58 Stat. 887, 891).

This report discusses irrigation prospects in general and in particular recommends the authorization of initial divisions of the overall irrigation project. With the aid that the use of surplus power revenues from the Chief Joseph Dam powerplant would give to irrigation, it would be possible to develop extensive areas for agricultural production. This would tend to stabilize and balance the economy of the area.

The initial divisions recommended for immediate authorization would result in a full water supply for 5,680 acres, of which 4,550 acres have not previously received an irrigation water supply. The estimated cost is \$4,798,000 and the initial divisions are economically justified.

The report has been transmitted to the States of the Columbia River Basin and to the Secretary of the Army for their views and recommendations as required by the provisions of the Flood Control Act of 1944; to the State of Washington for the comments of the head of the agency exercising administration over the wildlife resources of the State, as required by the provision of the act of August 14, 1946 (60 Stat. 1080); and to the Departments of Agriculture, Commerce, Labor, and Health, Education, and Welfare; and the Federal Power Commission, in accordance with interagency agreements. Copies of all comments received are enclosed with the report.

I shall appreciate having advice concerning the relationship of this proposed project to your program before I transmit the report to the Congress for its consideration and appropriate action in accordance with the provisions of the acts cited in the first paragraph of this letter.

Sincerely yours,

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D. C., April 13, 1954.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This will acknowledge receipt of your letter of January 7, 1954, submitting your report on potential irrigation in conjunction with Chief Joseph Dam, Wash., and Assistant Secretary Aandahl's letter of February 3, 1954, submitting additional comments of the Department of Agriculture. The report was prepared in accordance with the provisions of section 9 (a) of the Reclamation Project Act of 1939, under the special authorization contained in the act of July 17, 1952 (Public Law 577, 82d Cong.).

The overall plan outlined in your report would provide ultimately for the irrigation of about 75,000 acres at a cost tentatively estimated at \$33 million of which \$11,200,000 would be financed by the water users over a period of 50 years. The Commissioner of Reclamation, in his report to you, states that the financial assistance required from the Corps of Engineers' Chief Joseph Dam power revenues for the remaining \$21,800,000 would be \$436,000 annually for 50 years. The regional director points out that power produced at the Chief Joseph Dam will become a part of the pooled supply generated by various Federal dams of the Columbia River system and marketed by the Bonneville Power Administration. Charges for commercial power will be at rates established by the Bonneville Power Administration after review and approval by the Federal Power Commission. He also sets forth the amounts that would be required to be repaid by the Bonneville Power Administration to cover annual operation, maintenance, and replacement costs and interest and amortization on the power investment of Chief Joseph Dam, and to return irrigation costs beyond the ability of the irrigators to repay.

Your report recommends authorization of the initial phases of the overall plan to provide for the irrigation of lands in the Blue-bottle Flat, Brewster Flat, and Bridgeport Bar areas, comprising a total of 5,680 acres of which 4,550 acres have no water supply at present. The total cost of this improvement on the basis of October 1952 price levels is \$4,798,100, including \$40,800 of the cost of Chief Joseph Dam proposed for allocation to irrigation, and \$311,300 in funded operation and maintenance costs. The average cost per acre of land benefited is estimated at \$845. The total average annual benefits per acre are estimated at \$187 of which \$58 are classified as direct benefits. The annual cost, including power-pumping charges, is estimated at about \$44 per acre. The resultant benefit-cost ratios are 4.28 on the basis of total

estimated benefits and 1.34 on the basis of direct benefits only. The limit of repayment ability by the irrigators over a 50-year period is stated to be \$1,722,450. You propose that the remainder of the capital cost, \$3,075,650, would be repaid with excess power revenues from Chief Joseph Dam.

The States of Washington, Idaho, Montana, and Wyoming favorably endorse the recommended improvement. However, the State of Montana reserves the right to claim benefits that may accrue downstream from the use of water originating in Montana, and the State of Wyoming points out that the estimated irrigation costs per acre appear to be relatively high.

The Corps of Engineers states that the Wells Reservoir, if constructed on the Columbia River at mile 516, would affect certain lands to be served by this project. The Corps also states that this project would have no material effect on the operation of Chief Joseph Dam or on its capability of fulfilling its primary purpose.

The Department of Agriculture questions the magnitude of the anticipated direct benefits and points out that, in addition to the Federal cost per acre, private developers would be required to make relatively high expenditures, particularly where apple orchards are involved, thereby possibly requiring special credit arrangements. The Department states, however, that the recommended improvement appears to be an acceptable proposal.

In order to assure that sufficient power revenues over and above amounts needed to reimburse the Federal Government for the cost of the power investment in Chief Joseph Dam would be available within its 50-year repayment period to repay the irrigation costs of the Foster Creek Division that are beyond the financial ability of the water users to repay, it would appear essential that requests for appropriations for construction of the irrigation works be conditioned on a current financial analysis and schedule of power generation and rates demonstrating such repayment ability. The Bureau of the Budget also believes that, in view of the sizable secondary benefits involved in this project, consideration should be given to a requirement for the establishment of a conservancy district to insure maximum justifiable contribution or repayment by those to whom secondary benefits of the project will accrue.

Accordingly, you are advised that there would be no objection to the submission of your report to the Congress or, if amended to cover the suggestions outlined above, to the authorization of the initial phases of the improvement as recommended herein. No commitment, however, can be made at this time as to when any estimate of appropriation would be submitted for construction of the project, if authorized by the Congress, since this would be governed by the President's budgetary objectives as determined by the then prevailing fiscal situation.

It is requested that a copy of this letter be included with your report when it is submitted to the Congress.

Sincerely yours,

(Signed) ROWLAND HUGHES,
Deputy Director.

UNITED STATES DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D. C., April 16, 1954.

Hon. JOSEPH W. MARTIN,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: My report concerning potential irrigation in the vicinity of the Chief Joseph Dam project, Washington, is transmitted herewith pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187, 1193) and the act of July 17, 1952 (66 Stat. 753).

The report presents general information on irrigation prospects for the area of about 75,000 acres in extent and recommends authorization of an initial phase of development that would comprise 5,680 acres.

The report has been transmitted to the States of the Columbia River Basin and to the Secretary of the Army for their views and recommendations as required by the provisions of the Flood Control Act of 1944; to the State of Washington for the comments of the head of the agency exercising administration over the wildlife resources of the State, as required by the provision of the act of August 14, 1946 (60 Stat. 1080); and to the Departments of Agriculture, Commerce, Labor, and Health, Education, and Welfare; and the Federal Power Commission, in accordance with inter-agency agreements. Copies of all comments received, which generally are favorable, are enclosed with the report.

My report and copies of all comments were transmitted to the President through the Bureau of the Budget. I have been advised by the Bureau of the Budget that there would be no objection to the submission of the report to the Congress or to authorization of the recommended features if the legislation conforms to the conditions set forth in the Deputy Director's letter of April 13, 1954, a copy of which is attached.

Sincerely yours,

FRED G. AANDAHL,
Assistant Secretary of the Interior.

An act to authorize the Secretary of the Interior to construct, operate, and maintain the irrigation works comprising the Foster Creek division of the Chief Joseph Dam project, Washington. (Act of July 27, 1954, 68 Stat. 568, Public Law 540, 83d Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, as an initial step in supplementing the Act of July 17, 1952 (Public Law 577, Eighty-second Congress), and in order to provide water for

the irrigation of approximately six thousand acres of land along the Columbia and Okanogan Rivers in the vicinity of Chief Joseph Dam, Washington, the Secretary of the Interior is authorized to construct, operate, and maintain the Foster Creek division of the Chief Joseph Dam project substantially in accordance with the report of the Secretary of the Interior dated January 7, 1954, and printed as House Document Number 374, Eighty-third Congress.

SEC. 2. In the construction, operation and maintenance of the Foster Creek division, the Secretary shall be governed by the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto) except that (a) the period provided in subsection (d), section 9, of the Reclamation Project Act of 1939 (53 Stat. 1187), for repayment of construction costs properly chargeable to any block of lands and assigned to be repaid by the irrigators may be extended to fifty years, exclusive of a development period, from the time water is first delivered to that block or to as near that number of years as is consistent with the adoption and operation of a variable payment formula as hereinafter provided; (b) any repayment contract entered into may provide that the amounts to be paid annually thereunder shall be determined in accordance with a formula, mutually agreeable to the parties, which reflects economic conditions pertinent to the irrigators' payment capacity; and (c) all construction costs which are beyond the ability of the irrigators to repay as hereinbefore provided shall be charged to, and returnable to the reclamation fund from, net revenues derived from the sale of power from the Chief Joseph Dam project which are over and beyond those required to amortize the power investment in said project and to return interest on the unamortized balance thereof. Power and energy required for irrigation pumping for the Foster Creek division authorized shall be made available by the Secretary from the Chief Joseph Dam powerplant and other Federal plants interconnected therewith at rates not to exceed the cost of such power and energy from the Chief Joseph Dam taking into account all costs of the dam, reservoir, and powerplant which are determined by the Secretary under the provisions of the Federal reclamation laws to be properly allocable to such irrigation pumping power and energy.

SEC. 3. Reports on additional reclamation units in the vicinity of the Chief Joseph Dam project proposed to be constructed as units of the project shall be submitted by the Secretary from time to time in accordance with the provisions of the Act of July 17, 1952, *supra*.

SEC. 4. There are hereby authorized to be appropriated out of any moneys in the Treasury not otherwise appropriated, \$4,798,000 plus or minus such amounts, if any, as may be justified by reason of ordinary fluctuations in the cost of said type of construction without endangering the economic feasibility of the Foster Creek division of the Chief Joseph Dam project, Washington.

COLLBRAN PROJECT

COLORADO

The Collbran project was approved by the Secretary of the Interior on May 9, 1950 and authorized by the Act of July 3, 1952. (66 Stat. 325, Public Law 445, 82d Cong., 2d sess.)

BUREAU OF RECLAMATION,
Washington, D. C., December 9, 1949.

The SECRETARY OF THE INTERIOR.

SIR: This is my proposed report on the potential Collbran project, in the upper Colorado River Basin in Colorado. My report is based on and includes the accompanying report of the regional director, Salt Lake City, Utah, dated November 18, 1949.

The Collbran project is located in the Plateau and Grand Valleys at the base of Grand Mesa on the western slope of the Continental Divide in west central Colorado. It would supply needed irrigation, municipal, and domestic water, and electric energy.

Population pressure in the Plateau Valley has created an urgent need for additional water for irrigation, but because of the costs involved local interests cannot build the works needed to supply this water. In Grand Valley existing municipal and industrial demands are taxing the existing facilities to capacity. Domestic water for farm homes throughout the area must be hauled long distances or be taken from irrigation ditches. The latter source produces water of doubtful potability. The normal growth of Grand Valley will soon increase the demand for water beyond the physical capacity of existing works. Power supplies in the area are already inadequate and it is anticipated that industrial development of oil-bearing shales, uranium ores, and coal will aggravate the shortage.

The plan of development for the Collbran project provides for diversion of a minimum of 20 second-feet continuous flow from two Grand Mesa streams, Big and Cottonwood Creeks, by a pipeline, which would transport the water for industrial and municipal use, to an equalizing reservoir near Grand Junction. The diverted

water would be used en route at two power plants to generate annually 51,600,000 kilowatt-hours of firm power and 6,670,000 kilowatt-hours of secondary power. Stream-flow regulation needed to accomplish this diversion would be provided by enlarging Benham Reservoir on Big Creek and utilizing eight small natural lakes in the upper reaches of Big and Cottonwood Creeks. As the water that would be diverted to Grand Valley is now used for irrigation in Plateau Valley, it would be replaced by surplus spring runoff from upper Plateau, Leon, and Park Creeks that would be stored until needed in the potential Vega Reservoir. With regulation at Vega Reservoir these streams would provide, in addition to the required replacement, an average of about 15,900 acre-feet of water annually as a new irrigation supply for 20,650 acres of land in Plateau Valley including 2,310 acres now idle for lack of water and 18,340 acres inadequately irrigated.

The project plan includes provisions recommended by the Fish and Wildlife Service to increase fish and wildlife values. Recreational facilities recommended by the National Park Service would be provided, to the maximum practicable extent after project construction. Costs of recreational development are not included as a part of the indicated construction cost. Silt and flood-control benefits from this project are minor. The project does not involve stream-pollution abatement, Indian lands, or navigation.

Rights to the use of the water required for the project could be obtained in accordance with the Colorado State water law. The projects would consume less than 1 percent of the Colorado River water which it is estimated, will be available for future development in the State of Colorado under the terms of the Upper Colorado River Basin compact.

The estimated construction cost of the Collbran project is \$13,299,000. Operation, maintenance, and replacement costs of the project works are expected to average \$108,800 annually. Based on the annual benefits of the project accruing through the preservation and propagation of fish and wildlife over the repayment period, a nonreimbursable allocation of \$257,000 is proposed in the report. The remaining \$13,042,000 would be reimbursable and would be allocated as follows: Irrigation, \$3,987,000; power production, \$6,313,000; and municipal use \$2,742,000.

The reimbursable construction costs would be returned in full to the United States. Irrigation water users would be required to repay \$20,000 annually toward construction costs, in addition to paying their share of operation, maintenance, and replacement costs. Over the recommended 50-year repayment period, following a 3-year development period, this would return \$1,000,000. The balance of the irrigation allocation would be assigned for repayment from the interest component of the power revenues. Municipal and industrial water users would be required to repay their share of the construction costs of the project in 60 years, with interest at 2 percent, a total of \$78,880 annually, in addition to paying their share of the operation, maintenance, and replacement costs. This would return the municipal water allocation of \$2,742,000 plus interest amounting to \$1,991,000.

Power rates of 5.6 mills per kilowatt-hour for firm energy and 3 mills for nonfirm energy would return \$308,960 annually, which would pay the operation, maintenance, and replacement costs, and return the capital costs allocated to power in 60 years, with 3 percent interest, and provide a balance at the end of this period of \$139,000. The interest payments, amounting to \$7,285,600, would be used in part to repay that portion of the irrigation allocation which is beyond the ability of the water users to repay.

It will probably be desirable at a future date to consolidate the Collbran project in a basin plan for development of the upper Colorado River Basin.

I concur in and adopt the recommendations of the regional director as set forth in paragraph 26 of his report.

I recommend that you approve and adopt this report as your proposed report on the Collbran project and that you authorize me, in your behalf, to transmit copies to the States of the Colorado River Basin and to the Secretary of the Army in accordance with the requirements of the Flood Control Act of 1944 (58 Stat. 887), to the State of Colorado for the views and recommendations of the head of the agency exercising administration over the wildlife resources of the State of Colorado in accordance with provisions of the act of August 14, 1946 (60 Stat. 1080), and to other interested Federal agencies for their comments.

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved and adopted: December 30, 1949.

(Signed) OSCAR L. CHAPMAN,
Secretary of the Interior.

BUREAU OF RECLAMATION,
Washington 25, D. C., May 8, 1950.

The SECRETARY OF THE INTERIOR.

SIR: Transmitted herewith is my report on the Collbran project, in west central Colorado.

In your behalf, copies of the report which you adopted on December 30, 1949, as your proposed report were sent to the Secretary of the Army and to designated officials of the States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming for their views and recommendations in accordance with the provisions of section 1 of the Flood Control Act of 1944 (58 Stat. 887), and to the Governor of Colorado for the report and recommendations of the head of the agency exercising administration over the wildlife resources of the State of Colorado in accordance with the requirements of the act of August 14, 1946 (60 Stat. 1080). Copies of the proposed report were sent also to

the Federal Power Commission and the Departments of Agriculture and Commerce for their comments. Copies of the written views of the States, with the exception of the State of Nevada, from which comments have not been received, and of the Federal agencies are attached with a copy of your proposed report.

The views of the reviewing officials of the States of Arizona, New Mexico, Utah, and Wyoming are favorable to the development of the project in accordance with the plan set forth in your proposed report. The State of California had no official comments to offer. Colorado, the State in which the project works are proposed, concurs in the findings of the report and suggests minor refinements in the project plan which can easily be carried out if found to be feasible at the time the project is under construction.

The Chief of Engineers, writing on behalf of the Secretary of the Army, has advised that the recommended project will not conflict with any of the interests of the Department of the Army. Comments of the other Federal agencies are favorable.

Informal comments on the report which have been received from Rural Electrification Administration cooperatives and municipalities in the area make it desirable for me to point out at this time that in order to serve energy to preference customers in west central Colorado in accordance with Reclamation law and Departmental policy it will be necessary to construct considerable transmission lines in addition to those specifically discussed in the Collbran report. The nature of the power to be produced by the Collbran project does not fit in well with the type of load to be expected from these preference customers, inasmuch as the energy production at the project plants is based upon very high plant factors, while to satisfy the preference load there would be need for peaking power at low load factors. This type of load can best be met through facilities which will be provided following construction of powerplants and transmission lines in connection with the proposed Colorado River storage project. The power market in this area and the facilities to serve that load are considered to be a part of the storage project. It is contemplated also that there will be interconnection between the Collbran project powerplants and the plants of the Colorado River storage project. This interconnection is expected to take place almost as soon as power can be produced on the Collbran project. Authorization for transmission facilities to serve preferential customers in this area will therefore be requested as a part of the Colorado River storage project. Should there be substantial lag between the time power is produced on the Collbran project and the time Colorado River storage power will be available, efforts will be made to satisfy preferential customers through wheeling arrangements.

After consideration of all comments received, I suggest no change in your proposed report other than your approval of the above clarification with respect to the serving of preferential power customers.

Accordingly, I recommend that you adopt the report which you approved on December 30, 1949, as clarified by this letter, as your final report on the Collbran project, and that you transmit it,

together with copies of the attached comments, to the President and, subsequently, to the Congress in accordance with the provisions of the Reclamation Project Act of 1939.

Respectfully,

(Signed) WESLEY R. NELSON,
Acting Commissioner.

Approved and adopted: May 9, 1950.

(Signed) WILLIAM E. WARNE,
Acting Secretary of the Interior.

AUTHORIZATION OF COLLBRAN PROJECT

An act to authorize the Secretary of the Interior to construct, operate, and maintain the Collbran reclamation project, Colorado. (Act of July 3, 1952, 66 Stat. 325, Public Law 445, 82d Cong., 2d sess.)

* * * That, for the purpose of supplying water for the irrigation of approximately twenty-one thousand acres of land and for municipal, domestic, industrial, and stock water uses and of producing and disposing of hydroelectric power and, as incidental to said purposes, for the further purpose of providing for the preservation and propagation of fish and wildlife, the Secretary of the Interior is authorized to construct the Collbran reclamation project, Colorado, substantially in accord with the plans set forth in the report of the Bureau of Reclamation approved by him, May 9, 1950, the estimated construction cost of which project is approximately \$16,086,000, and to operate and maintain the same.

SEC. 2. In constructing, operating, and maintaining the Collbran project, the Secretary shall be governed by the Federal reclamation laws (act of June 17, 1902, 32 Stat. 388, and acts amendatory thereof or supplementary thereto) except so far as these laws are inconsistent with this act: *Provided*, That any contract entered into pursuant to subsection (d) of section 9 of the Reclamation Project Act of 1939 (53 Stat. 1187) may provide that the general repayment obligation shall be spread in annual installments, in number and amounts satisfactory to the Secretary, over a period of not exceeding 50 years, exclusive of any development period as therein provided, for any project contract unit or for any irrigation block, if the project contract unit be divided into two or more irrigation blocks: *Provided further*, That, notwithstanding any provision of law to the contrary, net revenues derived from the sale of commercial power and from the furnishing of water for municipal, domestic, and industrial use shall be applied, first, to the amortization, with interest, of those portions of the actual cost of the construction of the project which are allocated, respectively, to commercial power and to municipal, domestic, and industrial water supply; and, thereafter, shall be applied to amortization of that portion of the cost allocated to

irrigation which is beyond the ability of the irrigation water users to repay within the period specified above. Amortization of that portion of the construction cost allocated to commercial power shall include interest on the unamortized balance thereof at 3 per centum per annum. Repayment of that portion of the actual cost of constructing the project which is allocated to municipal, domestic, and industrial water supply and of interest on the unamortized balance thereof at a rate (which rate shall be certified by the Secretary of the Treasury) equal to the average rate paid by the United States on its long-term loans outstanding at the time the repayment contract is negotiated minus the amount of such net revenues as may be derived from temporary water supply contracts or from other sources prior to the close of the repayment period, shall be assured by a contract or contracts satisfactory to the Secretary, the term of which shall not exceed 50 years from the date of completion of the municipal and industrial water supply features of the project as determined by the Secretary.

SEC. 3. There are hereby authorized to be appropriated, out of any moneys in the Treasury not otherwise appropriated, approximately \$16,086,000 to carry out the purposes of this act.

SEC. 4. This act and all works constructed hereunder shall be subject to and controlled by the Colorado River Compact dated November 24, 1922, and proclaimed effective by the President June 25, 1929, the Boulder Canyon Project Act approved December 2, 1928, the Upper Colorado River Basin Compact dated October 11, 1948, and the Mexican Water Treaty, and no right or claim of right to the use of the waters of the Colorado River shall be aided or prejudiced hereby.

COLORADO-BIG THOMPSON PROJECT

COLORADO

The Colorado-Big Thompson project was found feasible by the Secretary on December 20, 1937, under the provisions of section 4 of the act of June 25, 1910 (36 Stat. 836), and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702), and was approved by the President on December 21, 1937. The Interior Department Appropriation Act, 1938 (50 Stat. 564, 595), appropriated the sum of \$900,000 for the Colorado-Big Thompson project for construction in accordance with the plan described in Senate Document Numbered 80, Seventy-fifth Congress.

PROVISIONS OF INTERIOR DEPARTMENT APPROPRIA- TION ACT, 1938

[Extract from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1938, and for other purposes. (Act of August 9, 1937, 50 Stat. 566, 595, Public Law 249, 75th Cong., 1st sess.)

* * * * *

Colorado-Big Thompson project, Colorado: For construction in accordance with the plan described in Senate Document Numbered 80, Seventy-fifth Congress, \$900,000: *Provided*, That no construction thereof shall be commenced until the repayment of all costs of the project shall, in the opinion of the Secretary of the Interior, be assured by appropriated [sic] contracts with water conservancy districts, or irrigation districts or water users' associations organized under the laws of Colorado, or other form of organization satisfactory to the Secretary of the Interior; * * *

SYNOPSIS OF REPORT, COLORADO-BIG THOMPSON PROJECT

[Extract from Senate Document No. 80, 75th Cong.]

OUTLINE OF CONSTRUCTION AND OPERATING CONDITIONS

The Colorado-Big Thompson project in Colorado contemplates the diversion of surplus waters from the headwaters of the Colorado River on the Pacific or western slope to lands in northeastern Colorado on the Atlantic or eastern slope greatly in need of supplemental irrigation water.

To accomplish this diversion, the following features are required:

On Colorado River

(1) Storage on the Blue River in what is called Green Mountain Reservoir located about 16 miles southeast of Kremmling, Colo., where the Blue enters the Colorado River. This reservoir is to be used to replace water diverted to the eastern slope that would be required by prior rights along the Colorado River.

(2) A hydroelectric plant below the Green Mountain Dam to utilize the flow of the Blue River and water stored in the reservoir for the generation of electrical energy.

(3) A storage reservoir located on the Colorado River about 6 miles northeast of Granby, Colo., to be known as Granby Reservoir. This reservoir will store the flow of the Colorado at this point as well as water diverted from Willow Creek, a tributary of the Colorado and Strawberry and Meadow Creeks, tributaries of the Fraser River.

(4) A diversion dam located about one-half mile below the junction of the North Fork and Grand Lake outlet and about 3 miles south of the village of Grand Lake. This dam will create a lake known as Shadow Mountain Lake which will have the same elevation as Grand Lake and will aid in supplying the transmountain diversion tunnel with water pumped from Granby Reservoir. This lake together with Grand Lake is to be kept at nearly constant level.

(5) An electrically driven pumping plant on the shore of Granby Reservoir, where water will be pumped into a canal feeding Shadow Mountain and Grand Lakes. The length of the canal is $4\frac{1}{2}$ miles.

(6) An outlet channel at the east end of Grand Lake connecting the lake with the portal of a transmountain diversion tunnel and

provided with control features that will regulate the level of Grand Lake within a fluctuating range of 1 foot.

(7) A transmountain diversion tunnel under the Continental Divide 13.1 miles in length extending from Grand Lake to a point in Wind River about 5 miles southwest of Estes Park village.

On Eastern Slope

(8) A conduit 5.3 miles in length extending from diversion tunnel outlet to penstock of a power plant on the Big Thompson River just below Estes Park village. This conduit will be made up of buried pipe, siphons, tunnels, and open canal. It will be entirely concealed through the area authorized to be taken into Rocky Mountain National Park.

(9) The waste rock from the tunnel is to be terraced and landscaped and all structures connected with the tunnel will be constructed to blend into their natural surroundings.

(10) A power plant known as power plant no. 1 constructed along the Big Thompson River just below the village of Estes Park utilizing the western slope water.

(11) Four additional power plants down the Big Thompson Canyon to utilize all available fall and also all water available for power in the Big Thompson River in addition to the western slope water diverted.

(12) A diversion dam on Big Thompson River about 12 miles west of Loveland to divert the water by means of a canal 9 miles in length to a storage reservoir known as Carter Lake.

(13) Carter Lake Reservoir located 8 miles northwest of Berthoud, Colo., to store water brought over during winter months. Water is released from this reservoir through a 4-mile canal into the Big Thompson River and through a 9-mile canal into the St. Vrain River for irrigation purposes.

(14) A siphon across the Big Thompson River, 9 miles west of Loveland, Colo., and a canal 10 miles in length to convey water from the fourth power plant to a storage reservoir, located about 5 miles west of Fort Collins, known as Horsetooth Reservoir.

(15) A canal from Horsetooth Reservoir to the Cache La Poudre River and extended north to a pumping plant which lifts water high enough to serve the North Poudre Canal.

(16) A storage reservoir near the mouth of Buckhorn Creek to be known as Arkins Reservoir, supplied from a canal diverting from the Big Thompson River just below the last power plant. It is to be used to aid in balancing the demands for power and irrigation, also storing excess water available in the Big Thompson River. Water will be released from the reservoir for supplemental irrigation in the South Platte area.

(17) Transmission lines connecting the Valmont steam plant of the Public Service Co. with all the hydroelectric plants contemplated, also connecting with the transmountain tunnel portals and the Granby and North Poudre pumping plants. The line connecting power plant no. 1 and Granby pumping plant will run east, and south of the outside boundaries of the Rocky Mountain

National Park, crossing the Continental Divide at Buchanan Pass.

In order to carry out the construction, operation, and maintenance of the project as outlined above, it will be necessary to comply with the following requirements as agreed to by representatives of the eastern and western slopes in Colorado and here made as a part of this report.

MANNER OF OPERATION OF PROJECT FACILITIES AND AUXILIARY FEATURES

The construction and operation of this project will change the regimen of the Colorado River below the Granby Reservoir. The project contemplates the maximum conservation and use of the waters of the Colorado River, and involves all of the construction features heretofore listed. In addition thereto certain supplemental construction will be necessary. This will be for the primary purpose of preserving insofar as possible the rights and interests dependent on this water, which exist on both slopes of the Continental Divide in Colorado. The project, therefore, must be operated in such a manner as to most nearly effect the following primary purposes:

1. To preserve the vested and future rights in irrigation.
2. To preserve the fishing and recreational facilities and the scenic attractions of Grand Lake, the Colorado River, and the Rocky Mountain National Park.
3. To preserve the present surface elevations of the water in Grand Lake and to prevent a variation in these elevations greater than their normal fluctuation.
4. To so conserve and make use of these waters for irrigation, power, industrial development, and other purposes, as to create the greatest benefits.
5. To maintain conditions of river flow for the benefit of domestic and sanitary uses of this water.

In order to accomplish these purposes the project should be operated by an unprejudiced agency in a fair and efficient manner, equitable to all parties having interests therein, and in conformity with the following particular stipulations:

(a) The Green Mountain Reservoir, or similar facilities, shall be constructed and maintained on the Colorado River above the present site of the diversion dam of the Shoshone power plant, above Glenwood Springs, Colo., with a capacity of 152,000 acre-feet of water, with a reasonable expectancy that it will fill annually. Of said capacity, 52,000 acre-feet of water stored therein shall be available as replacement in western Colorado, of the water which would be usable there if not withheld or diverted by said project; 100,000 acre-feet shall be used for power purposes; and all of said stored waters shall be released under the conditions and limitations hereinafter set forth.

(b) Whenever the flow in the Colorado River at the present site of said Shoshone diversion dam is less than 1,250 cubic feet per second, there shall, upon demand of the authorized irrigation

division engineer or other State authority having charge of the distribution of the waters of this stream, be released from said reservoir as a part of said 52,000 acre-feet, the amount necessary with other waters available, to fill the vested appropriations of water up to the amount concurrently being diverted or withheld from such vested appropriations by the project for diversion to the eastern slope.

(c) Said 100,000 acre-feet shall be stored primarily for power purposes, and the water released shall be available, without charge, to supply existing irrigation and domestic appropriations of water, including the Grand Valley reclamation project, to supply all losses chargeable in the delivery of said 52,000 acre-feet of water, and for future use for domestic purposes and in the irrigation of lands thereafter to be brought under cultivation in western Colorado. It shall be released within the period from April 15 to October 15 of each year as required to supply a sufficient quantity to maintain the specified flow of 1,250 cubic feet per second of water at the present site of said Shoshone diversion dam, provided this amount is not supplied from the 52,000 acre-feet heretofore specified. Water not required for the above purposes shall also be available for disposal to agencies for the development of the shale oil or other industries.

(d) The cost of construction and perpetual operation and maintenance of said reservoir or reservoirs shall be a charge against the project and shall be paid from revenues collected from this project as may be provided in contracts between the Secretary of the Interior and the beneficiaries of the project in eastern Colorado, and any other contracting parties.

(e) In the event said reservoir or reservoirs are not maintained with a capacity of 52,000 acre-feet, the Secretary of the Interior should withhold the diversion of water from the western to the eastern slope of Colorado until such storage capacity is made available.

(f) The Secretary of the Interior shall have the option to require the transfer to the United States of any and all rights initiated or acquired by the appropriation or use of water through the works of the project in eastern Colorado, at any time: *Provided, however,* That the title so taken shall be subject to a beneficial use of such water as may be provided in the repayment contract or contracts; and the rights to store water to the extent of said 152,000 acre-feet shall be initiated, acquired, and held by the appropriate authorities for use in western Colorado, for replacement of water diverted to the eastern slope, and for other purposes contemplated for this project.

(g) The Secretary of the Interior shall operate this project in accordance with the following stipulations as to priorities of water use as between the parties claiming or using project water and within the limits of his legal authority. Said 52,000 acre-feet of replacement storage in Green Mountain or other reservoirs shall be considered to have a date of priority for the storage and use of replacement water earlier than that of the priorities for the water diverted or stored for delivery to the eastern slope. The 100,000

acre-feet of storage in said reservoir shall be considered to have the same date of priority of appropriation as that for water diverted or stored for transmountain diversion.

(h) Said Green Mountain Reservoir, or such other replacement reservoirs as provided in paragraph (a) herein, as are planned as a part of the project, shall be constructed at the same time as the other parts of the project and shall be completed before any water is diverted to the eastern slope of the Continental Divide by means of said project.

(i) Inasmuch as the State of Colorado has ratified the Colorado River Compact, and inasmuch as the construction of this project is to be undertaken by the United States, the project, its operation, maintenance, and use must be subject to the provisions of said Colorado River Compact of November 24, 1922 (42 Stat. 171), and of section 13 of the Boulder Canyon Project Act, dated December 21, 1928 (45 Stat. 1057—1064). Notwithstanding the relative priorities specified in paragraph (g) herein, if an obligation is created under said compact to augment the supply of water from the State of Colorado to satisfy the provisions of said compact, the diversion for the benefit of the eastern slope shall be discontinued in advance of any western slope appropriations.

(j) An adequate system, as determined by the Secretary of the Interior, shall be provided for the irrigation of the lands in the vicinity of Kremmling, now irrigated by either natural or artificial means, and the installation made therefor shall be a part of this project. The rights to the use of water for the irrigation of these lands shall be considered to have a date of priority earlier than that of the rights to the use of water to be diverted through the works of this project to the eastern slope. This system shall be designed and built in a manner requiring the least possible continuing annual expense for operation and maintenance but the cost thereof shall not exceed \$300,000; and said system shall be provided and in operation before any water is stored for transmountain diversion. In addition, the Secretary shall protect, add to, or improve the source of supply of domestic waters for the municipalities of Kremmling and Hot Sulphur Springs in the manner and to the extent which he may determine to be necessary to provide a source of supply not less than that now available for these municipalities. The cost of these features shall be included in the total project cost.

(k) To compensate Grand County for the loss of taxes through the transfer of property to the United States for the construction of this project, \$100,000 shall be paid to said Grand County. This payment shall be made in 10 annual installments of \$10,000 each, commencing upon the date when 10 percent of the total property in Grand County required for said project has been removed from taxation.

(l) The project and all of its features shall be operated in a manner determined by the Secretary of the Interior as necessary to provide the water to preserve at all times that section of the Colorado River between the reservoir to be constructed near Granby and the mouth of the Fraser River as a live stream, and

also to insure an adequate supply for irrigation, for sanitary purposes, for the preservation of scenic attractions, and for the preservation of fish life. The determination of the need for and the amount and times of release of water from Granby Reservoir to accomplish these purposes shall be made by the Secretary of the Interior, whose findings shall be final.

In order to facilitate compliance with the stipulation in paragraphs (j), (k), and (l) hereof a representative may be selected and designated by the interests dependent thereon in Grand County, Colo., and when so designated he will be recognized as the official spokesman of said interests in all matters dealing with project operations affecting Grand County.

The principles and provisions expressed in these stipulations have been approved by the Western Colorado Protective Association, representing interests in western Colorado, and the Northern Colorado Water Users Association as evidenced by the letters hereto attached.

SUMMARY

The Colorado-Big Thompson project comprises 615,000 acres of irrigated lands, out of approximately 800,000 acres lying under the canal systems in the northern and northeastern portions of Colorado.

The water supply for the area is to be derived from a portion of 782 square miles of drainage area above Hot Sulphur Springs lying west of the Continental Divide in Grand County, Colorado, and varying in elevation from 8,050 to 14,000 feet.

OFFICE OF THE SECRETARY,
Washington, December 20, 1937.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The following report on the Colorado-Big Thompson project in the State of Colorado is made to you under the provisions of Section 4 of the Act of June 25, 1910 (36 Stat. 835).

Section 4 of the Act of June 25, 1910, provides in effect that after the date of that Act no irrigation project to be constructed under the Act of June 17, 1902 (32 Stat. 388) and Acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924, (43 Stat. 701), provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes and that it will probably return the cost thereof to the United States.

The Colorado-Big Thompson project contemplates the construction of a system of reservoirs, canals, and a pumping plant on the western slope, a long tunnel through the Continental Divide, and a system of reservoirs, canals, and power plants on the eastern slope. By this means, the waters of the Colorado River and certain tributaries will be conserved on the western slope, diverted by tunnel to the eastern slope, re-stored there in a system of reservoirs, and later released to the Poudre, Big Thompson, and South Platte rivers, and to St. Vrain Creek for subsequent distribution through existing canals and ditches to 615,000 acres of land which now have an inadequate water supply.

WATER SUPPLY

The Colorado River and tributaries feeding the system have an average annual divertible water supply of 320,000 acre feet, derived principally from the spring melting of snows, which will be caught in a reservoir constructed on the Colorado River and will be used almost entirely as a supplemental water supply for the lands on the eastern slope. A replacement reservoir of 152,000 acre feet is to be built on the Blue River, a tributary of the Colorado River, to furnish an ample water supply for vested and future rights for irrigation and power that exist on the Colorado River below the mouth of the Blue River. By this means, the entire supply of 320,000 acre feet, mentioned above, will be made available for eastern slope use.

Reservoirs also will be built on the eastern slope. The storage in these reservoirs and the water diverted from the western slope will provide an adequate supplemental water supply so that the 615,000 acres of land in the project will have a sufficient irrigation supply except in very infrequent seasons. The furnishing of this supplemental supply will permit the raising of crops of a higher per acre value than those grown at present and will, as well, allow the production of more abundant crops.

ENGINEERING FEATURES AND CONSTRUCTION COST

The principal construction features are as follows:

1. Green Mountain Reservoir on the Blue River for replacement purposes with a capacity of 152,000 acre feet. The reservoir is to be formed by a dam of the compacted earth embankment type with a height of 258 feet above the stream bed and a crest length of 1,000 feet.
2. Granby Reservoir on the Colorado River, six miles northeast of Granby, with an effective storage capacity of 462,000 acre feet. The reservoir is to be

formed by a dam of the compacted earth embankment type with a height of 223 feet above the stream bed and crest length of 720 feet.

3. Willow Creek Diversion Canal to divert the waters of Willow Creek, a tributary of the Colorado River, into Granby Reservoir. The canal will have a capacity of 1,000 second feet and a length of 12.6 miles. It traverses mainly open country and involves no difficult construction problems.

4. Shadow Mountain Lake on the Colorado River which is actually an extension to the south of Grand Lake at the mean water surface elevation of Grand Lake. It increases the water surface area of Grand Lake nearly $2\frac{1}{2}$ times. Shadow Mountain Lake is formed by construction of the North Fork diversion dam downstream from the junction of the Grand Lake outlet with the Colorado River. The maximum height of the dam above the stream bed will be 48 feet, and the main portion of the dam, 350 feet in length, will be of concrete gravity type with a 90-foot overflow section in the center. Siphon spillway sections will flank both ends of the overflow section. Compacted earth sections will connect the concrete sections with higher ground on either side. The dam and spillways will automatically hold the elevation of the water surface of Grand Lake and Shadow Mountain Lake within one foot of the present mean level of Grand Lake. The purpose of Shadow Mountain Lake and Grand Lake is to reduce by about $7\frac{1}{2}$ miles the length of the Continental Divide tunnel.

5. Granby Pumping Plant and Granby Feeder Canal. As Granby Reservoir lies several miles to the south and at a lower elevation than Shadow Mountain Lake, it is necessary to pump the water from Granby Reservoir through an average lift of 130 feet and convey it by means of a $4\frac{1}{2}$ -mile canal to Shadow Mountain Lake. The pumping plant, located on the northeast shore of Granby Reservoir, will contain 3 electrically driven units, each of 290 s.f. capacity. The canal from the pumping plant to Shadow Mountain Lake will have a normal capacity of 800 s.f.

6. Continental Divide Tunnel, 13.1 miles in length, $9\frac{1}{2}$ feet in diameter, and 550 s.f. capacity. The inlet portal will be located about 800 feet from the east shore line of Grand Lake and 700 feet west of the western boundary of Rocky Mountain National Park. The outlet portal is east of the eastern boundary of the park, but on land that is authorized to be taken into the park. The tunnel runs in a general northeasterly direction. It will be excavated entirely from the two portals, and the excavated material will be carefully piled and the natural scenic beauty will be retained by terracing, landscaping and planting.

7. Power Canal and Power Plant No. 1. A conduit of approximately 5.4 miles in length and 550 s.f. capacity, connects the east portal of the Continental Divide tunnel with Power Plant No. 1. The section on the lands that may be taken into the park will be entirely underground. The power plant, located $\frac{1}{2}$ mile east of the town of Estes Park, Colorado, will contain two 15,000 k.v.a. generating units operating under a static head of 746 feet. The average annual output of the plant is estimated to be 207,000,000 k.w.h. of which the Granby Pumping Plant will require 48,000,000 k.w.h. The balance of the power will be available for commercial purposes.

8. Carter Lake, Horsetooth, and Arkins Reservoirs. Carter Lake Reservoir will be located 8 miles west of Berthoud, Horsetooth Reservoir 5 miles west of Fort Collins, and Arkins Reservoir 6 miles northwest of Loveland. The total capacity of the three reservoirs will be 256,000 a.f. The dams forming the reservoirs are to be of compacted earth embankment type having a maximum height of 190 feet above stream bed and a maximum crest length of 1,500 feet.

9. Canals, diversion works, and other features to convey the water from pumping plant No. 1 to the three reservoirs and to the existing supply canals. Until the power system is fully developed, water from power plant No. 1 will flow down the Big Thompson River for a distance of about 15 miles and then be diverted through canals to the three reservoirs. Canals also will extend from the reservoir outlets to existing distribution works on the project.

10. Five additional power plants to be installed as the power market becomes available. One of these plants will be located on the North Fork of the Thompson River and three others on the main channel of the Big Thompson River. When these plants are installed, a canal will be built along one bank or the other of the Big Thompson River to provide the necessary drop for

developing power at the various plants. The fifth plant will be built at the Green Mountain dam. The costs of all power plants and other features properly allocable thereto will be repaid from power revenues.

The estimated costs of original construction are as follows:

Green Mountain Reservoir.....	\$3,776,032
Granby Reservoir	2,813,703
Willow Creek Feeder Canal.....	733,203
North Fork Diversion Dam.....	483,928
Granby Pumping Plant and Feeder Canal.....	1,667,553
Continental Divide Tunnel	7,271,371
No. 1 Power Plant and Canal.....	2,879,000
Carter Lake, Horsetooth, and Arkins Reservoirs.....	7,409,597
Canals, diversion works, and other features	4,628,385
Total	¹ 31,702,772

¹ Sic. Correct total, \$31,662,772.

Of this cost \$6,902,772 has been tentatively allocated to the power development leaving \$24,800,000 to be repaid by the irrigation interests. Except for the equitable allocation of costs to power development, no credit or revenues from power sales will be made to the irrigators but all will be retained by the United States.

LAND PRICES

The project will furnish a supplemental water supply for an area of 615,000 acres of land, lying in the South Platte River Basin in Colorado. These farm lands are now under cultivation, are highly improved, and are served with a complete distribution system of canals, reservoirs, and lateral ditches of an estimated value of \$35,000,000.

Practically all lands are now under or subject to irrigation, but due to droughts and lack of an adequate and dependable supply of water, annual crop losses are excessive and can be avoided only by a supplemental supply of water furnished to the project. This project seems to be the only feasible source for this additional water.

ADAPTABILITY OF LAND TO SETTLEMENT AND FARM HOMES

The lands embraced in the project are of high fertility and capable, when sufficiently supplied with irrigation water, of supporting a much larger population. The furnishing of the supplemental supply contemplated in the Colorado-Big Thompson project will enable the farmers to grow diversified crops. It is expected that this will result in the farms being broken up into smaller units, thus providing homes for settlers from arid lands in the vicinity who are now suffering the loss of lands and homes by reason of drought conditions.

PROBABLE RETURN TO RECLAMATION FUND OF COST OF CONSTRUCTION

The payment of construction costs will be derived from the sale of water for irrigation purposes and the sale of electrical energy. The repayment contracts which will be executed with a water conservation or irrigation district will provide for payment of the construction costs that are allocated to irrigation features from revenues obtained from two sources: one by means of direct taxation of all property within the district and the other by the sale of water for supplemental use on those lands to which water is allotted by the districts. These latter payments will be secured by tax liens on the farms receiving benefits of water from the project.

The history of tax collections in the district during the past ten years shows an annual tax collection of 98%. The plan proposed for the collection of water charges contemplates a possible surcharge of 50% of taxes to cover defaults and deficiencies.

Nearly all the lands are in private ownership. The average holdings are 96 acres per farm. With the increased water supply, many of the farms will undoubtedly be divided into smaller units. No control of land prices is planned since all are now settled and farmed. Land values now range from \$50 to \$200 per acre.

It is considered that the means proposed for repayment of construction charges will provide ample security and sufficient funds for the return of costs of construction.

OBJECTIONS TO THE PROJECT

Attention has been given to the objections to this project by various persons and organizations interested in national parks. On November 12, 1937, I held a hearing which was well attended by the proponents and opponents of the project who were given an opportunity for open discussion. Regardless of the point of view of those who would preserve national parks unimpaired, the Organic Act which established Rocky Mountain National Park, approved January 26, 1915, reserved the right to utilize the park for irrigation purposes as follows:

The United States Reclamation Service may enter upon and utilize for flowage or other purposes any area within said park which may be necessary for the development and maintenance of a Government reclamation project.

Congress again expressed its will when it authorized the construction of the project and appropriated \$900,000 in the Department of the Interior Appropriation Bill approved August 9, 1937.

Certain agreements which will benefit the park have been entered into informally and will be made binding before the commencement of the construction. These agreements involve the furnishing of a firm supply of water from the project to the park; free electricity for Government purposes; abstention from construction work within the park boundaries; and the right of

the Park Service to pass upon plans and specifications where lands authorized to be added to the park are involved.

The objections of the persons on the western slope of the Rocky Mountains from whose watershed the water will be diverted to the eastern slope were withdrawn when the plans provided for a compensatory reservoir on the western slope where feasible.

At the conclusion of the morning hearings on November 12, after the principal arguments had been presented for and against the project, I made a statement summing up the situation which is faced by the Secretary of the Interior and the President. I am enclosing a copy of this statement for your information.

FINDINGS REGARDING FEASIBILITY OF PROJECT

In view of all of the circumstances, the changes in the plans, and the care which will be exercised to avoid injury to the park, I find that the project is feasible from an engineering and economic standpoint and so declare.

In order to prevent the abandonment of developed lands, and also to improve economic conditions involving a population of 175,000 people in northeastern Colorado, I recommend that construction of the Colorado-Big Thompson project be approved and that construction be started at an early date.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved December 21, 1937.

(Signed) FRANKLIN D. ROOSEVELT,
President.

COLORADO RIVER FRONT WORK AND LEVEE SYSTEM

ARIZONA-CALIFORNIA-NEVADA

Section 16 of the act of March 3, 1925 (43 Stat. 1186, 1198), among other things, authorized an annual appropriation in the sum of \$35,000 to be expended under the direction of the Secretary of the Interior to defray the cost of operating and maintaining the Colorado River Front Work and Levee System adjacent to the Yuma reclamation project. Section 4 of the act of January 21, 1927 (44 Stat. 1010, 1021), increased the authorized annual appropriation to \$100,000.

The act of July 1, 1940 (54 Stat. 708) amended the latter act by extending the Bureau's authority so as to include the construction, operation and maintenance of necessary protective works and systems along the Colorado River between the Yuma project and Hoover Dam.

The act of June 28, 1946 (60 Stat. 338), amended the act of July 1, 1940 and authorized annual appropriations of such sums as are necessary to be spent by the Bureau of Reclamation to defray the cost of (1) operating and maintaining the Colorado River Front Work and Levee System in Arizona, Nevada, and California; (2) construction, improving, extending, operating and maintaining protection and drainage systems along the Colorado River; (3) controlling the Colorado River and improving, modifying, straightening, and rectifying its channel and; (4) conducting investigations and studies in connection therewith.

RIVER AND HARBOR IMPROVEMENTS AUTHORIZED

[Extracts from] An act authorizing the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes. (Act of March 3, 1925, 43 Stat. 1186, 1198, Public Law 585, 68th Cong., 2d sess.)

* * * That the following works of improvement are hereby adopted and authorized, to be prosecuted under the direction of the Secretary of War and supervision of the Chief of Engineers,

in accordance with the plans recommended in the reports hereinafter designated:

* * * * * *

SEC. 16. (a) That there is hereby authorized to be appropriated, out of any moneys in the Treasury of the United States not otherwise appropriated, the sum of \$650,000, or so much thereof as may be necessary, to reimburse the reclamation fund for the benefit of the Yuma Federal irrigation project in Arizona and California for all costs, as found by the Secretary of the Interior, heretofore incurred and paid from the reclamation fund for the operation and maintenance of the Colorado River Front Work and Levee System adjacent to said project.

(b) That there is hereby authorized to be appropriated, out of any moneys in the Treasury of the United States not otherwise appropriated, the sum of \$50,000, or so much thereof as may be necessary, to be transferred to the reclamation fund and to be expended under the direction of the Secretary of the Interior for the purpose of paying the operation and maintenance costs of said Colorado River Front Work and Levee System adjacent to said Yuma project, Arizona-California, for the fiscal year ending June 30, 1926.

(c) That there is hereby authorized to be appropriated, out of any moneys in the Treasury of the United States not otherwise appropriated, for the fiscal year ending June 30, 1927, and annually thereafter, the sum of \$35,000, or so much thereof as may be necessary as the share of the Government of the United States of the costs of operating and maintaining said Colorado River Front Work and Levee System.

[Extract from] An act authorizing the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes. (Act of January 21, 1927, 44 Stat. 1010, 1021, Public Law 560, 69th Cong., 2d sess.)

* * * That the following works of improvement are hereby adopted and authorized, to be prosecuted under the direction of the Secretary of War and supervision of the Chief of Engineers, in accordance with the plans recommended in the reports hereinafter designated:

* * * * * *

That there is hereby authorized to be appropriated, out of any moneys in the Treasury of the United States not otherwise appropriated, for the fiscal year ending June 30, 1928, and annually thereafter, the sum of \$100,000, or so much thereof as may be necessary, to be spent by the Reclamation Bureau under the direction of the Secretary of the Interior, to defray the cost of operating and maintaining the Colorado River Front Work and Levee System adjacent to the Yuma Federal irrigation project in Arizona and California.

[Extract from] An act to authorize defraying cost of necessary work between the Yuma project and Boulder Dam. (Act of July 1, 1940, 54 Stat. 708, Public Law 697, 76th Cong., 3d sess.)

* * * That the provision of the Act entitled "An Act authorizing the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes," approved January 21, 1927, is amended to read as follows:

There is hereby authorized to be appropriated, out of any moneys in the Treasury of the United States not otherwise appropriated, for the fiscal year ending June 30, 1928, and annually thereafter, the sum of \$100,000, or so much thereof as may be necessary, to be spent by the Reclamation Bureau under the direction of the Secretary of the Interior to defray the cost of operating and maintaining the Colorado River Front Work and Levee System adjacent to the Yuma Federal irrigation project in Arizona and California and to defray the cost of other necessary protection works and systems along the Colorado River between said Yuma project and Boulder Dam.

An act to amend the laws authorizing the performance of necessary protection work between the Yuma project and Boulder Dam by the Bureau of Reclamation. (Act of June 28, 1946, 60 Stat. 338, Public Law 469, 79th Cong., 2d sess.)

That the provision of the Act entitled "An Act authorizing the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes," approved January 21, 1927 (44 Stat. 1010, 1021), amended by the Act entitled "An Act to authorize defraying cost of necessary work between the Yuma project and Boulder Dam," approved July 1, 1940 (54 Stat. 708), is hereby further amended to read as follows:

That for the purpose of controlling the floods, improving navigation, and regulating the flow of the Colorado River, there is hereby authorized to be appropriated, out of any moneys in the Treasury of the United States not otherwise appropriated, for the fiscal year ending June 30, 1928, and annually thereafter, such sums as may be necessary, to be spent by the Bureau of Reclamation under the direction of the Secretary of the Interior, to defray the cost of (a) operating and maintaining the Colorado River Front Work and Levee System in Arizona, Nevada, and California; (b) constructing, improving, extending, operating, and maintaining protection and drainage works and systems along the Colorado River; (c) controlling said river, and improving, modifying, straightening, and rectifying the channel thereof; and (d) conducting investigations and studies in connection therewith: *Provided*, That the expenditure of moneys for any of the foregoing purposes shall not be deemed a recognition of any obligation or liability whatsoever on the part of the United States: *Provided, further*, That, within the discretion of the Secretary of the Interior, local communities to be benefited by works constructed pursuant to this Act may be required to provide, without cost to the United States, necessary rights-of-way and maintenance of the completed works and assurance, satisfactory to him, of payment of valid claims arising out of damage caused to persons or property by reason of the construction, operation, or maintenance of any such works: *Provided further*, That any moneys received by the United States as reimbursement in accordance with contracts heretofore entered into under the authority of the Act of December 21, 1928 (45 Stat. 1057), as amended, and ratified by the Act of August

30, 1935 (49 Stat. 1028, 1039), for expenditures made under the authority of this paragraph, shall be covered into the Treasury as miscellaneous receipts. In connection with operations conducted under this paragraph, the Secretary of the Interior shall have the same authority with respect to (a) the acquisition, exchange and disposition of lands, interests in lands, water rights and other property, and the relocation thereof; (b) the utilization of lands owned or acquired by the United States; (c) construction and supply contracts; (d) the performance of necessary or proper acts; and (e) the making of necessary or proper rules and regulations, which he has in connection with projects under the Federal reclamation laws, Act of June 17, 1902 (32 Stat. 388), and Acts amendatory thereof or supplementary thereto. Nothing contained in this paragraph shall be deemed to amend, repeal, or otherwise affect the provisions contained in the First Deficiency Appropriation Act, 1944, under the caption "Department of the Interior, Bureau of Reclamation—Colorado River front work and levee system" (58 Stat. 150, 157).

[Extract from] An act making appropriations to supply deficiencies in certain appropriations for the fiscal year ending June 30, 1944, and for prior fiscal years, to provide supplemental appropriations for the fiscal year ending June 30, 1944, and for other purposes. (Act of April 1, 1944, 58 Stat. 150, 157, Public Law 279, 78th Cong., 2d sess.)

* * * That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, to supply deficiencies in certain appropriations for the fiscal year ending June 30, 1944, and for prior fiscal years, to provide supplemental appropriations for the fiscal year ending June 30, 1944, and for other purposes:

* * * * *

Colorado River Front Work and Levee System: For an additional amount for the Colorado River Front Work and Levee System, \$250,000, to be available for the construction, operation, and maintenance of a temporary weir in the Colorado River below the heading of the diversion canal for the Palo Verde Irrigation District, California: *Provided*, That the construction, operation, or maintenance of said weir shall not be deemed a recognition of any obligation or liability whatsoever on the part of the United States; and no part of said sum or other funds of the United States shall be expended for the construction, operation, or maintenance of said weir after six months from the date of the termination of the present war, as determined by proclamation of the President or concurrent resolution of the Congress.

PROVISIONS OF INTERIOR DEPARTMENT APPROPRIATION ACT, 1946

[Extract from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1946, and for other purposes. (Act of July 3, 1945, 59 Stat. 318, 343, Public Law 123, 79th Cong., 1st sess.)

* * * That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, for the Department of the Interior for the fiscal year ending June 30, 1946, namely:

* * * * *

Colorado River Front Work and Levee System: To defray the cost of operating and maintaining the Colorado River Front Work and Levee System adjacent to the Yuma Federal irrigation project in Arizona and California, and to defray the cost of other necessary protection works along the Colorado River between said Yuma project and Boulder Dam, as authorized by the Act of July 1, 1940 (54 Stat. 708), to be immediately available, \$112,500, which, together with the appropriation for this purpose in the Interior Department Appropriation Act, 1945, shall remain available until June 30, 1947, and of which not to exceed \$95,000 may be expended for the purchase of lands subject to seepage or overflow and improvements thereon: *Provided*, That the expenditure of any moneys for the purchase of said lands and improvements or for remedial or other necessary works for the protection of public or private property in or near the city of Needles, California, shall not be deemed a recognition of any obligation or liability whatsoever on the part of the United States: *Provided further*, That any moneys received by the United States as reimbursement in accordance with contracts heretofore entered into under the authority of the act of December 21, 1928 (45 Stat. 1057), as amended, and ratified by the act of August 30, 1935 (49 Stat. 1028), for work in or near said city of Needles, shall be covered into the Treasury as miscellaneous receipts.

PALO VERDE VALLEY FLOOD PROTECTION

[Extract from] An act making appropriations to supply deficiencies in certain appropriations for the fiscal year ending June 30, 1932, and prior fiscal years, to provide supplemental appropriations for the fiscal years ending June 30, 1932, and June 30, 1933, and for other purposes. (Act of July 1, 1932, 47 Stat. 525, 535, Public Law 235, 72d Cong., 1st sess.)

* * * That the following sums are appropriated, out of any moneys in the Treasury not otherwise appropriated, to supply deficiencies in certain appropriations for the fiscal year ending June 30, 1932, and prior fiscal years, to provide supplemental appropriations for the fiscal years ending June 30, 1932, and June 30, 1933, and for other purposes, namely:

* * * * *

Palo Verde Valley, California, flood protection: For the protection of the Palo Verde Valley, California, from overflow and destruction by Colorado River floods, to be expended under the direction of the Secretary of the Interior for the purpose of repairing and reconstructing the levee system on the Colorado River in front of the said Palo Verde Valley, fiscal year 1933, \$50,000, or so much thereof as may be necessary.

COSTS TRANSFERRED FROM YUMA PROJECT

An act to authorize credits to certain public agencies in the United States for costs of construction and operation and maintenance of flood protective levee systems along or adjacent to the lower Colorado River in Arizona, California, and Lower California, Mexico. (Act of September 2, 1950, 64 Stat. 576, Public Law 750, 81st Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That for the purpose of relieving certain public agencies of the United States of costs heretofore incurred or paid relating to the construction and operation and maintenance of flood protective levee systems along or adjacent to the lower Colorado River in Arizona, California, and Lower California, Mexico, there is hereby authorized:

(a) The transfer by the Secretary of the Interior from the account for the Yuma and Yuma Auxiliary irrigation projects to the accounts for the Colorado River Front Work and Levee System project, of all construction, operation, and maintenance costs, other charges and credits relating to the construction and operation and maintenance of the Colorado River Front Work and Levee System adjacent to the Yuma Federal irrigation project in Arizona and California; and

(b) A credit to and on behalf of Imperial Irrigation District of California to be applied against the next succeeding annual payments as the same become due and payable from said district to the United States under any repayment contract by and between Imperial Irrigation District and the United States in an amount not greater than 80 per centum of such items of construction, operation, and maintenance costs heretofore paid or incurred by said district for flood-protection works, including among others, levees, railroads, quarries, river rectification works for flood-control purposes, and appurtenant works and facilities, in, along, or adjacent to the Colorado River in Arizona, California, and Lower California, Mexico, as shall be determined and found to be equitable by the American Commissioner of the International Boundary and Water Commission, United States and Mexico, but in no event shall the total credit exceed \$3,000,000.

SEC. 2. Any other costs and charges allocable or assignable to the Yuma project and not repayable under existing contracts, under water-right applications heretofore or hereafter filed, nor otherwise recoverable, all as may be determined from time to time in any instance by the Secretary of the Interior shall, less applicable credits, be nonreimbursable, and the Secretary, in his discretion, may declare any lands temporarily suspended from a paying status at the date of this enactment to be permanently unproductive, and may adjust the balance of individual construction charge accounts accordingly: *Provided*, That such adjustment shall not include any refund or credit for payment theretofore made on account of lands so declared permanently unproductive.

COLORADO RIVER PROJECT

TEXAS

The Colorado River project was authorized by the Rivers and Harbors Act of August 26, 1937 (50 Stat. 844, 850) for construction by the Secretary of the Interior.

BUREAU OF RECLAMATION,
Washington, D.C., March 15, 1935.

Memorandum for the SECRETARY.

Subject: Colorado River Development, Texas, Docket No. 380.

I regret the delay in replying to your memorandum of March 2. It has been deferred until I could consult the files from your office and hear from Colonel Hunt.

The reports indicate that there is an adequate supply of water for the power development proposed and for the irrigation of a considerable area of rice land. Because of extreme fluctuations in its discharge, the use of the river depends on adequate storage. This the plans for development provide.

To secure the best economic results from power development, the fundamental idea should be public control of power generation and distribution. This can be accomplished through a legally constituted State authority as the plans contemplate, or by the ownership and operation of these works by the Federal Government. There may be constitutional objection to this procedure. The rates to be charged for electrical energy so generated should be approved by the United States.

With the regulation of the river through storage, there will be made available for irrigation enough water to irrigate about 125,000 acres of rice land along the lower reaches of the river. It is understood that this irrigation will be profitable, but unless the conditions under which water is to be delivered and the price to be paid for it are fixed in advance, great difficulty may be encountered in reaching an agreement with irrigators as to the price to be paid for water or in inducing them to enter into con-

tracts under which they will be definitely obligated to pay for the water diverted.

I believe this development will result in valuable economic benefits to the region; that so far as the power development is concerned the plans proposed will make it a solvent undertaking. There remains to be determined how far irrigation is to form a part of this scheme, and the steps to be taken to insure an income from the users of water in irrigation.

(Signed) ELWOOD MEAD,
Commissioner.

RESOLUTION ADOPTED MAY 21, 1935, BY
PRESIDENT AND ADVISORY COMMITTEE ON ALLOT-
MENTS, COLORADO RIVER PROJECT, TEXAS

Whereas the project of the Lower Colorado River Authority (Texas) for the improvement of that River will control substantially its flood waters and reclaim many thousands of acres now subject to destructive floods, as more fully appears by the report of the Army Engineers (House Document 361, 71st Cong., 2d Sess.) and by memorandum dated April 26, 1935, signed by the Acting Deputy Administrator of Public Works;

Whereas the project as submitted to the Federal Emergency Administration of Public Works by the Authority includes the completion of the incomplete dam, reservoir and other works at and near Bluffton, Llano County, Texas (Hamilton Dam), a unified system and series of dams at and below that site, impounding reservoirs, hydroelectric works, works for irrigation and other uses, transmission lines and other appurtenances;

Whereas it appears from the records of the Texas Relief Commission, period April 1, 1934, to November 30, 1934, that the total number of relief cases within a fifty mile radius of Hamilton Dam, plus Bexar County, Texas, during said period was 23,997, that the number of persons dependent on relief therein aggregated 95,442, and it is estimated that the man hours required at sites for the accomplishment of the project amount to 15,000,000 and the total number of men employed at any one time will be 4,400 and not less than 80% of the total cost of the project will be expended by July 1, 1936, and the remaining 20% will be applied to finance contracts for the fabrication of materials, under which contracts men will be put to work prior to July 1, 1936;

Whereas the estimated cost of said project is \$20,000,000 as more fully appears by said memorandum and an aggregate allocation of that amount is recommended by the Secretary of the Interior and the Federal Emergency Administrator of Public Works;

Resolved, That the President and this Board allocate to the Department of the Interior, Bureau of Reclamation, the sum of \$5,000,000 to aid in financing that portion of the project relating to flood control from funds made available to the President by Section 1 (h) of the Emergency Relief Appropriation Act of 1935;

Resolved further, That the President and this Board allocate to the Federal Emergency Administration of Public Works \$15,000,000 to finance that portion of the cost of the project not provided for by the above allocation. This allocation is from funds made available to the President by Section 1 (g) of said Act. Such allotment therefrom as may be made by the said Administrator to the Authority is to be by loan and grant; the grant not to exceed 30% of the cost of labor and materials employed upon the project (except that part apportioned to flood control); the loan to be by purchase

of the revenue bonds of the Authority, subject to the execution of a contract, satisfactory to the Administrator, between the United States of America and the Authority.

Said contract is to provide that the plans, specifications and construction of the project in so far as they relate to flood control shall be subject to the approval of the Commissioner of Reclamation, as shall also vouchers for expenditures against the allocation for flood control.

The President and this Board find upon the basis of said memorandum that not less than 25% of such loan and grant is to be expended for work under the said project.

MARSHALL FORD DAM

[Extract from] An act authorizing the construction, repair, and preservation of certain public works on rivers and harbors, and for their purposes. (Act of August 26, 1937, 50 Stat. 844, 850-851, Public Law 392, 75th Cong., 1st sess.)

* * * SEC. 3. That for the purpose of improving navigation, controlling floods, regulating the flow of streams, providing for storage and for delivery of stored waters, for the reclamation of lands, and other beneficial uses, and for the generation of electric energy as a means of financially aiding and assisting such undertaking, the project known as "Marshall Ford Dam," Colorado River project, in Texas, is hereby authorized and adopted and all contracts and agreements which have been executed in connection therewith are hereby validated and ratified, and the Secretary of the Interior, acting through such agents as he may designate, is hereby authorized to construct, operate, and maintain all structures and incidental works necessary to such project, and in connection therewith to make and enter into any and all necessary contracts including contracts amendatory of or supplemental to those hereby validated and ratified.

COLORADO RIVER STORAGE PROJECT AND PARTICIPATING PROJECTS

ARIZONA-COLORADO-NEW MEXICO- UTAH-WYOMING

Construction of four storage units of the Colorado River Storage project and 11 participating projects was authorized by the act of April 11, 1956 (Public Law 485, 84th Cong.). Authorized developments are listed below.

STORAGE PROJECT UNITS

Glen Canyon unit on the Colorado River in Arizona and Utah.
Flaming Gorge unit on the Green River in Utah and Wyoming.
Navajo unit on the San Juan River in New Mexico and Colorado (dam and reservoir only).
Curecanti unit on the Gunnison River in Colorado (subject to further engineering and economic investigations and to a limitation on the height of the principal dam of the unit).

PARTICIPATING PROJECTS

Central Utah (initial phase), Utah.
Emery County, Utah.
Florida, Colorado.
Hammond, New Mexico.
La Barge, Wyoming.
Lyman, Wyoming.
Paonia, Colorado (works additional to existing project).
Pine River Extension, Colorado and New Mexico.
Seedskadee, Wyoming.
Silt, Colorado.
Smith Fork, Colorado.

In the investigations of additional developments in the Upper Basin, twenty-five additional potential participating projects are to receive priority consideration in the completion of planning reports.

The Eden project in Wyoming, which is now largely constructed, would, by terms of its authorizing act of June 28, 1949, become financially related to the Colorado River Storage project as a participating project.

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D. C., November 13, 1953.

The SECRETARY OF THE INTERIOR.

SIR: At your request and pursuant to the request of the Director of the Bureau of the Budget contained in his letter to you of January 27, 1953, the report of the previous administration on the Colorado River Storage project and participating projects has been reviewed. The attached supplemental report on the project dated October 1953, has been prepared to supersede the previous reports of the Commissioner of Reclamation and Secretary of the Interior and to bring up to date the December 15, 1950, report.

The new report is based on the December 15, 1950, report of Reclamation's regional director and it includes the comments of the affected States and agencies on that previous report.

I find that the elements recommended for initial authorization in the attached report have economic and engineering feasibility and that they will soon be needed to meet the requirements of the compacts and the international commitments with respect to the waters of the Colorado River and to provide for economic stability and development of the upper Colorado River Basin. I, therefore, submit this report, incorporating with modifications the report of the regional director of the Bureau of Reclamation and superseding all other previous reports, as my report on the Upper Colorado River Storage project and participating projects.

I recommend that you approve and adopt the report and that you submit it to the President for advice concerning its relationship to his program.

Respectfully submitted.

(Signed) W. A. DEXHEIMER,
Commissioner.

Approved and adopted: December 10, 1953.

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

SUPPLEMENTAL REPORT ON COLORADO RIVER STORAGE PROJECT AND PARTICIPATING PROJECTS, UPPER COLORADO RIVER BASIN, OCTOBER 1953

[EXTRACTS]

1. This supplemental report on the Colorado River Storage project and participating projects in the States of Arizona, Colorado, New Mexico, Utah, and Wyoming is based on the accompanying report of the regional director, Bureau of Reclamation, Salt Lake City, Utah, dated December 15, 1950, and is a departmentwide report recommending authorization of programs of all agencies of the Department. The report supersedes and replaces, with modifications, the previous reports of the Commissioner of the Bureau of Reclamation and the Secretary of the Department of the Interior on this project, and modifies and brings the report of the regional director up to date. Comments of the affected States and of interested Federal agencies on our proposed report, obtained in accordance with the provisions of the Flood Control Act of December 22, 1944 (58 Stat. 887), the act of August 14, 1946 (60 Stat. 1080), and applicable interagency agreements, are enclosed and made a part of this report.

2. The report of the Department of the Interior on the inventory of potential developments in the Colorado River Basin, House Document 419, 80th Congress, pointed out that, in view of the fact that there is not enough water available in the Colorado River system to permit construction of all of the potential projects and have full expansion of existing and authorized projects, the States of the Colorado River Basin should determine their respective rights to deplete the flow of the Colorado River consistent with the Colorado River compact. Following issuance of that document, the States of the Upper Colorado River Basin negotiated and formalized a compact called the Upper Colorado River Basin compact to which the Congress granted its consent in the act of April 6, 1949 (63 Stat. 31). Completion of that compact has permitted formulation of at least an initial stage of further development of the upper Colorado River Basin. The plan proposed and presented in the regional director's report was worked out in close cooperation with representatives of the States of the upper Colorado River Basin, and their favorable comments are enclosed.

3. A plan of ultimate development in terms of storage is presented in this supplemental report but recommendation is made for authorization at this time of only a partial development in terms both of storage and of water utilization. Selection of the plan for ultimate storage is based in general upon securing the needed reservoir capacity for all purposes, while attaining the

minimum in evaporation losses, water being prerequisite to the livelihood of the area. The initial units have been selected as being those best adapted to meeting the most pressing needs of the area. As indicated in the recommendations included herein, the proposal is such as to permit additions to the plan as other units and participating projects are investigated and weighed in the light of the criteria expressed herein. The total storage capacity contemplated ultimately is designed to assure that the flow of the river at Lee Ferry will not be depleted below 75 million acre-feet in any 10 consecutive years while permitting continued development of the upper basin as contemplated when the Colorado River compact was drawn up. Thus, upon the authorization of the units recommended, the upper basin may continue and increase its utilization of its waters and the lower basin may be assured that its rights under the compact are protected.

4. It is not contemplated that all units of the ultimate storage plan should be constructed or even authorized at this time. The project is planned to ultimately provide about 48 million acre-feet of total capacity which it now appears can best be accomplished by a series of 9 storage reservoirs. Recommendations for the authorization of other than the initially recommended units will be based on continued hydrologic investigations. Revenues from the sale of power generated at or made possible by these reservoirs should be used to assist in the repayment of reimbursable costs of worthy irrigation projects which might not otherwise be feasible under the Federal reclamation law. Additional storage project units should be constructed as required to meet the needs for consumptive use of water and for generation of electric energy.

5. In addition to permitting the upper basin to move forward with utilization of its waters, the Colorado River Storage project and participating projects will provide electrical energy to a large area where it is urgently needed. Flood protection, sediment retention, fish and wildlife conservation, and recreational opportunities will also be provided. Detailed recommendations and plans to accomplish these purposes will be prepared as a part of the detailed planning for the individual units and projects.

6. The underlying report of the regional director recommended approval of a system of 10 major dams and reservoirs as units of the storage project, with initial authorization of the Glen Canyon, Echo Park, Flaming Gorge, Navaho, and Whitewater units. Authorization of 12 initial participating projects was recommended, with provision for including 1 additional project, which is already authorized and under construction, as a participating project.

7. As mentioned hereinbefore, copies of the report of the regional director were submitted as a part of the proposed report of the Department of the Interior to the Secretary of the Army and to the States signatory to the Colorado River compact for their views and recommendations in accordance with the provisions of section 1 of the Flood Control Act of December 22, 1944, to the heads of the agencies of the States of Arizona, Colorado, New Mexico, Utah, and Wyoming exercising administration over the wildlife resources of the States for their report and rec-

ommendations in accordance with the provisions of the act of August 14, 1946, and to other interested Federal agencies for their views and comments. Copies of all the comments which have been received are enclosed with this supplemental report.

8. The reviewing officials of the States directly affected; namely, the upper division States of Colorado, New Mexico, Utah, and Wyoming, approved the proposed report, and commended the Department for the coordination between the States and the Department during the course of investigations and preparation of the report. They noted that there has been full compliance with the spirit and purpose of the Flood Control Act of 1944. They endorsed the recommendations in the proposed report and called attention to and made recommendations on matters beyond the scope of the proposed report.

* * * * *

22. Subsequent to the review of the proposed report by the States and agencies, further careful consideration has been given to a selection of the units of the storage project which should be recommended for initial authorization. Immediate needs of the basin are for storage space to permit holdover of water for release to the lower basin as required by the Colorado River compact while allowing substantial growth in consumptive use in the upper basin, and for power generating facilities to assist in meeting power load growth in and adjacent to the Colorado River Basin. The reservoirs must be completed and filling started at the earliest practicable date, because as consumptive uses in the upper basin increase there will be less and less water available for filling the reservoirs. Under the terms of the Colorado River compact, requiring delivery of water at Lee Ferry, the Glen Canyon Reservoir, located just above this point, occupies a key position for regulating water deliveries to the lower basin. Likewise, the Echo Park Reservoir, centrally located in the upper basin and controlling the upper Green and Yampa Rivers, occupies a strategic position. In particular, as the increased use of Green River water increases its salinity, the Echo Park Reservoir will permit mixing it with the relatively pure waters of the Yampa, so that the quality of water releases from the reservoir will be improved. The powerplants of the two reservoirs likewise are strategically located to permit economically serving the major loads expected to grow in the area. For these reasons, it has been concluded that the Glen Canyon and Echo Park units should be recommended for authorization at this time with transmission facilities necessary to interconnect these and other Federal hydroelectric plants and to market the power, and with recreational and associated facilities as recommended by the Director of the National Park Service which are incidental to the construction of dams and reservoirs in the Dinosaur National Monument. Every effort has been made to find suitable alternatives for the Echo Park and Split Mountain units because of their encroachment on the Dinosaur National Monument, but no adequate sub-

stitute for the Echo Park unit has been found because of the increased evaporation which will take place from the greater surface areas, at lower elevations, of the alternative reservoirs. Reasons for the elimination of the initial recommendations of the Whitewater unit and of the Navaho unit as two of the initial storage project units have been covered earlier in this report. After review of the purposes to be served by the Flaming Gorge unit, which was formerly recommended for initial authorization, it is believed that it might well be deferred for future development. The Echo Park unit will probably meet immediate needs in this area and Flaming Gorge can be recommended at a later date when it is required.

23. The necessary coordination of the storage project units and the participating projects for financial assistance can be accomplished without the establishment of the upper Colorado River account recommended in the underlying report and without applying the interest component of the power revenues to irrigation repayment. In order that all reimbursable costs of the project can be repaid to the Treasury without applying the interest component of the power revenues and without the establishment of the basin account, it is our recommendation that repayment of the costs which are allocated to irrigation and assigned to be repaid from power revenues be made from net power revenues after completion of the return of the commercial power investment, including interest during construction, with interest on the unamortized balance at a rate equal to the average rate paid by the United States on its long-term loans outstanding at the date of authorization of the project.

24. The estimated cost of the recommended units of the Colorado River Storage project and the initial participating projects as recommended for authorization herein is \$1,134,643,000 at January 1953 price levels, itemized as follows:

Echo Park unit.....	\$176,400,000
Glen Canyon unit.....	421,300,000
Central Utah (initial phase), Utah.....	231,044,000
Emery County, Utah.....	9,865,500
Florida, Colorado	6,941,500
Hammond, New Mexico.....	2,302,000
LaBarge, Wyoming	1,673,000
Lyman, Wyoming	10,564,000
Pine River extension, Colorado-New Mexico.....	5,027,000
Seedskadee, Wyoming	23,272,000
Silt, Colorado	3,356,000
Smith Fork, Colorado	3,367,000
Paonia, Colorado	6,944,000
Eden, Wyoming	7,287,000
Shiprock (Indian) division of Navaho project, including Navaho Reservoir and canal capacity for South San Juan Division...	225,300,000
Total	1,134,643,000

Construction of the Shiprock division would not be initiated until a report thereon has been submitted to the States and approved by the Congress. The cost of the Eden project, Wyoming.

\$7,287,000, which would be one of the initial participating projects under the recommendation contained herein, is included in the above tabulation although it is already authorized by the Congress and no further authority is required to complete construction. The full cost of the Paonia project is also included, although a portion of this project has been authorized, is already constructed, and the water users have contracted to repay the construction costs. The proposed reauthorization would increase the scope of the project, and incorporate it into the storage project for repayment of that part of the costs which exceeds the water users' repayment ability.

25. In addition to the aforementioned costs, the recreational planning and construction program and the archeological, wildlife, and geological programs, to be accomplished by the National Park Service in connection with the work in Dinosaur National Monument, are estimated to cost \$21 million. This work is of national significance, and the cost thereof should be nonreimbursable, and the funds should be appropriated as part of the National Park Service program.

26. Of the cost of the two initial units of the storage project, \$98,300,000 would be allocated to irrigation and other water consuming uses, and \$499,400,000 would be allocated to power, under the alternative-justifiable expenditure theory of cost allocation. Allocation of costs of the participating projects will be the subject of further study in connection with preparation of detailed plans.

27. The Colorado River Storage project and the initial participating projects, as recommended herein, have engineering feasibility, are economically justified, and, as a whole, would have financial feasibility if authorized by the Congress substantially in accordance with the recommendations contained herein. The project units and the participating projects recommended for initial authorization and development are sorely needed to permit meeting the requirements of the compacts and the international commitments with respect to the Colorado River and to provide for economic stability and development of the upper Colorado River Basin. Benefits from irrigation and other beneficial water consuming uses would be realized through construction of the dependent participating projects. The evaluated annual power benefits from the initially recommended units of the storage project exceed their annual costs in the ratio of 1.64 to 1. The benefit-cost ratios for the initial participating projects, computed in accordance with present Bureau of Reclamation practice, all exceed unity under present conditions. Irrigation revenues from the participating projects will pay the operation, maintenance, and replacement costs of those projects allocated to irrigation, and, in addition, for each project recommended, will repay a part of the capital cost of the participating project. Repayment of the power allocation of each of the recommended storage project units and the power allocation of the central Utah project, including interest during construction and including interest on the unamortized balance at a rate equal to the average cost to the Government of long-term money, now estimated at $2\frac{1}{2}$ percent, can be accomplished by

power revenues based on an average rate of 6 mills per kilowatt-hour within a 44-year period from the date the initial power unit is placed in operation. The 6-mill rate is used for illustrative purposes only. The actual selling price of the power will be established at rates consistent with sound business principles and taking into account the irrigation costs which are to be assigned for repayment from power revenues. Repayment of the irrigation allocation of the initial storage project units and the portion of the costs of the 12 non-Indian participating projects allocated to irrigation and other water consuming uses that exceeds the repayment ability of the water users, a total of \$268,829,000, and the portion, \$165,525,000, of the costs of the Shiprock Indian division of the Navajo project which is expected to be assigned for repayment from power revenues will be accomplished by the application of the net power revenues after the power costs are repaid. With annual net power revenues at the 6-mill average rate of about \$17 million from only the 2 initial units, as indicated on the attached financial operations study, repayment of the known irrigation costs could be accomplished within approximately 16 years after the close of the 44-year period of operations required for repayment of the power allocations of the first 2 units. Repayment of the costs of the Shiprock Indian Division would require an estimated additional 10 or 12 years. Even if all of the units, including the Shiprock division, were started and completed simultaneously, the period required for repayment of all reimbursable costs would not be in excess of the 50-year period recommended in Budget Circular A-47. Differences in complexities of construction and magnitude of the various units, lengths of development periods, and practicalities of appropriations will all dictate a staggered starting and completion schedule.

28. The units of the storage project would be operated as a system in order to produce by integration the maximum benefits from the sale of hydroelectric energy. Analyses of the power production of the nine units of the storage project on an incremental basis are contained on the attached summary sheets in order to show how each unit will fit into the system. One analysis is of the system including the 2.5 million acre-feet Curecanti Reservoir as originally planned by the Bureau of Reclamation. The other analysis includes the 940,000 acre-foot Curecanti desired by Colorado. Recommendation for authorization of other than the initial units will be supported by further additional studies.

29. The recommendations of the Bureau of Reclamation follow. They incorporate all the modifications to the recommendations of the regional director discussed above and thereby supersede all previous recommendations:

It is recommended—

(a) That the physical plan of development of the water resources of the upper Colorado River Basin as described in the underlying report of the regional director and as modified by this supplement report be approved;

(b) That authority be sought for the Secretary of the

Interior, acting pursuant to the Federal reclamation laws (act of June 17, 1902) (32 Stat. 388) and acts amendatory thereof or supplementary thereto, to construct, operate, and maintain (i) the following units of the Colorado River Storage project:

Echo Park

Glen Canyon

including transmission facilities to interconnect them and other Federal plants and to market the power produced, and (ii) the following initial participating projects subject to the other appropriate portions of these recommendations:

Central Utah (initial phase), Utah
Emery County, Utah
Florida, Colo.
Hammond, N. Mex.
LaBarge, Wyo.
Lyman, Wyo.

Pine River extension, Colo.-N. Mex.
Seedskadee, Wyo.
Silt, Colo.
Smith, Fork, Colo.
Paonia, Colo. (including Minnesota unit)

all as described in the report of the regional director but with such modification of, omissions from, or additions to the works as the Commissioner of Reclamation, with the approval of the Secretary, may find proper;

(c) That, as contemplated in its authorizing legislation, the Eden project, Wyoming, which has previously been authorized and is partially constructed, be included in the plan of development and that the storage project be charged with that portion of the reimbursable construction costs of the Eden project which is in excess of the amount specified to be repaid by the water users in the act of June 28, 1949 (63 Stat. 277); and that the Paonia project, Colorado, as described in the regional director's report, which is also partially constructed, be included in the plan of development and that the storage project be charged with that portion of the reimbursable costs of the Paonia project which is in excess of the amount which will be repaid within the period specified in the act of June 25, 1947 (61 Stat. 181);

(d) That, pursuant to the recommendation of the Commissioner of Indian Affairs, and in order to consolidate the recommendations of the Secretary for dependent projects in the upper Colorado River Basin, the Shiprock (Indian) division of the Navaho project, including the Navaho Dam and Reservoir, be authorized for construction, operation, and maintenance in accordance with laws applicable to the development of irrigation projects on Indian reservations, including the provisions of the act of July 1, 1932 (47 Stat. 564, 25 U.S.C., 1946 ed., 368a), the benefits of which act should be extended also to the Indian lands to be served by the Florida and the Pine River extension projects, provided,

however, that the Shiprock division shall receive assistance from the project power revenues in the same manner and to the same degree as other participating projects and that initiation of actual construction shall be deferred until there has been made available to the affected States and approved by the Congress a report on the division establishing the acreage to be served and the feasibility of the development;

(e) That authority be sought for the Secretary, acting pursuant to the laws applicable to the development of national parks, monuments, or recreational areas, to the extent to which those laws are not inconsistent with operation of the Colorado River Storage project units for their primary purposes, to construct, operate, and maintain the recreational facilities proposed in this report;

(f) That irrigation repayment contracts entered into provide, except in the case of the Eden and Paonia projects, for repayment of the obligation assumed thereunder over a period of not more than 50 years exclusive of any development period authorized by law;

(g) That authority be sought such that repayment of that part of the construction cost of the project (including the participating projects) which is allocated to irrigation and assigned to be repaid without interest from net power revenues will be accomplished from such revenues after completion of the return of the commercial power investment with interest on the unamortized balance at a rate not less than the average rate paid by the United States on its long-term loans outstanding at the time the project is authorized. Revenues and costs in connection with other undertakings hereafter authorized to be constructed should be included as a part of the Colorado River Storage project upon specific authorization by act of Congress;

(h) That the Secretary from time to time recommend to Congress for authorization additional units of the Colorado River Storage project and additional participating projects;

(i) That there shall be available to aid each participating project, or group of participating projects, an appropriate district, preferably of the water conservancy type, which shall be satisfactory to the Secretary of the Interior, one purpose of which shall be to provide revenues for the project, over and above those paid by irrigators, to assist in repayment of construction costs allocated to irrigation;

(j) That the investigations and programs proposed to be undertaken by certain agencies of the Department of the Interior, as summarized in paragraphs 33 through 39 of the regional director's report and presented in detail in the appended substantiating materials, be authorized; and that appropriations, therefore, be nonreimbursable, and that in the case of investigations conducted by the Bureau of Reclamation, except those financed under (1) below, the provisions of the act of April 19, 1945, should govern;

(k) That there be set up and maintained in the Treasury

from the receipts of the Colorado River Storage project a continuing fund of \$1 million to the credit of and subject to expenditure by the Secretary to defray emergency expenses and to insure continuous operation of the project;

(1) That there be set up and maintained in the Treasury from the receipts of the Colorado River Storage project a special fund, to be known as the upper Colorado River development fund, to which shall be transferred at the end of each fiscal year, beginning with the initial year of commercial power production by the Colorado River Storage project and the participating projects, 7½ percent of the net power revenues for that year after such net revenues exceed \$5 million annually, but not to exceed \$1 million in any one fiscal year, which should be available, upon appropriation (such appropriation to remain available until expended), for expenditure by the Secretary, without prejudice to the use by him for the same purposes of other appropriated moneys, for studies and investigations relating to the development, conservation and utilization of the waters of the upper Colorado River Basin, all expenditures from said fund to be nonreimbursable and nonreturnable under the Federal reclamation laws.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D. C., November 27, 1953.

MEMORANDUM.

To: The SECRETARY.

From: UNDER SECRETARY.

Subject: Construction of dams in the Dinosaur National Monument.

In accordance with your verbal instructions, I have made a study concerning the proposal to build the Echo Park Dam and the Split Mountain Dam as a part of the upper Colorado River Basin development. These two dams, if built, will be located within the Dinosaur National Monument. They were originally proposed to be included in the plan of development of the basin which was prepared by the Bureau of Reclamation and recommended for approval by the Secretary of the Interior in January 1951. Opposition developed to the construction of these two dams in the Dinosaur National Monument, and on December 4, 1952, the then Secretary of the Interior revised his recommendation and proposed that further consideration be given to studies of alternate sites. It was under these circumstances that you directed me to investigate the matter with particular reference to the suggested alternate sites.

In connection with this investigation I have reviewed the reports, sought and been furnished data and information from both the National Park Service and the Bureau of Reclamation, conferred with various interested parties and organizations, and have, in company with the Director of the National Park Service and the Commissioner of the Bureau of Reclamation, personally visited the two dam sites in question and inspected a considerable portion of the Dinosaur National Monument. I also inspected on the ground and from the air other portions of the upper Colorado River area.

The opposition to the two dams in question arises from persons and organizations interested in the national parks and their desire to preserve the Dinosaur National Monument in its present natural state. The Echo Park Dam, in particular, will create a large reservoir within this monument and will certainly alter its appearance and the existing conditions. It is a matter of personal opinion as to the extent of the harm that may be created by this reservoir. My own feeling is that the alteration will be substantial and if conflicting interests did not exist, I would prefer to see the monument remain in its natural state. However, I do feel that if the dam is built, the beauty of the park will by no means be destroyed and it will remain an area of great attraction to many people.

It should be noted that neither of these proposed reservoirs will inundate any portion of the quarry where the dinosaur skeletons have been found.

I have examined the proposals for various alternate reservoirs. To be effective these alternates must provide approximately the same storage of water and must waste as little water as possible. The latter is extremely important for the available water for consumptive uses in the upper Colorado River Basin is far less than will be needed for the full economy of this region.

I have been furnished with information on the New Moab, Dewey, Desolation dam sites, and have considered the possibility of increasing the height of the proposed Glen Canyon Dam. I am particularly impressed with the showing that any of these alternate dam and reservoir sites would result in a net loss of water from evaporation from approximately 100,000 to 200,000 acre-feet per year. Even the lower figure is enough to provide all of the domestic, commercial, and industrial water for a city the size of Denver. In an area where water is so precious this is a matter of very serious consequence. Such lost water cannot be replaced at any cost and the ultimate regional economy would have to be reduced accordingly.

There has been some question as to the accuracy of the estimates of evaporation and the application of the formulas used to compute losses. I have reviewed this matter and, while there may be some error due to a shortage of experimental data, I am convinced that the calculations are reasonable and any error that exists is equally applicable to the calculations for all reservoirs. Therefore, the error in net differences in calculated losses between any two reservoirs must be small.

There would be substantial loss in electric generating capacity if any one of the alternate sites were selected. While this is a matter of economic importance, I do not attach as much weight to it as to the loss of water. The power loss could be replaced by steam power at some increased cost.

I share the concern of those who would preserve the beauties of the Dinosaur National Monument in their present natural state, but as between a choice of altering this scenery without destroying it in a basin which is and will remain rich in scenery, or the irreplaceable loss of enough water to supply all the needs of a city the size of Denver, I believe the conservation of the water in the interest of the Nation is of greatest importance.

In view of the foregoing, I recommend that the plan for the development of the upper Colorado River Basin include the Echo Park and Split Mountain Dams and Reservoirs within the Dinosaur National Monument. This is in keeping with the original recommendation made by the former Secretary of the Interior.

(Signed) RALPH A. TUDOR,
Under Secretary.

Approved: November 30, 1953.
(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D. C., December 10, 1953.

THE PRESIDENT,
The White House.
(Through the Bureau of the Budget).

My DEAR MR. PRESIDENT: On December 4, 1952, my predecessor in office submitted a report on a proposed plan for the development and utilization of a portion of the water resources of the upper Colorado River Basin by construction of the Colorado River Storage project and participating projects. By letter of January 27, 1953, Budget Director Dodge asked that I review this report to determine whether it conforms to my program in terms of present policies and whether any modification or revision should be made.

After review of the report and reanalysis of the recommended units and projects by the Commissioner of Reclamation at my request, I submit herewith my revised report on the Colorado River storage project and participating projects, which supersedes the previous report of December 4, 1952.

A proposed report on this project was transmitted to the affected States and to the Secretary of the Army as required by

the Flood Control Act of December 22, 1944 (58 Stat. 887), and to other Federal agencies in accordance with interagency agreements, and copies of all the comments are included with the report. The comments of the heads of the agencies exercising administration over the wildlife resources of the States in which project works would be located are also included.

It should be noted that my revised report approves the Echo Park Dam and the Split Mountain Dam, both of which would be constructed within the Dinosaur National Monument. Because of the conflicting interests which have arisen in connection with these dams, I requested the Under Secretary to undertake a personal investigation of these proposed dam sites, the extent to which Dinosaur National Monument would be modified by their construction, and the possibility of alternative dam sites. I am attaching a copy of his memorandum on this subject.

The Department of the Interior in submitting this report anticipates modification of its opinion on any individual projects or units, at the time appropriations are sought, if necessary in the light of any additional information and economic studies that might then be available.

We shall appreciate having advice concerning the relationship of this proposed project to your program before I transmit the report to the Congress for its consideration and appropriate action.

Sincerely yours,

DOUGLAS MCKAY,
Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington 25, D. C., March 18, 1954.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This is in response to your letters of December 10 to the President and to the Bureau of the Budget, submitting your supplemental report on the Colorado River Storage project and participating projects. Further development of the upper Colorado River Basin in general accordance with the recommendations contained in your supplemental report has the support of the President. Legislation for that purpose which would authorize economically justified developments would be in accord with his program. With respect to the supplemental report, you are advised as follows:

1. The basinwide planning and close Federal-State coop-

eration which underlie your report carry out this administration's approach to water resource development.

2. Subject to the requirements of paragraphs 8 and 9 below, authorization of the Glen Canyon and Echo Park units of the storage project would be in accord with the program of the President. These units are strategically located to provide replacement storage to meet the upper basin's commitment to the lower basin and to permit increased consumptive use of water in the upper basin. In addition, both units will generate substantial amounts of hydroelectric power.

3. Authorization of recreational facilities to be constructed by the National Park Service within the Dinosaur National Monument would be in accord with the program of the President. Appropriations for this purpose should be so authorized that they can be made directly to the Park Service.

4. A requirement that conservancy districts be established to assist in irrigation repayments would be in accord with the program of the President and should be met before any participating project is undertaken.

5. Authorization to make the surplus power revenues of the storage projects available for repayment of construction costs of the Eden project and of the previously authorized portion of the Paonia project would be without objection.

6. Provisional authorization of the Shiprock unit of the Navaho project would not be in accord with the program of the President at this time. This advice is without prejudice to further consideration of the project when a report is completed indicating its economic justification, the views of the affected States and agencies, and the relation of the project to other potential uses of water of the San Juan River.

7. Subject to the requirements of paragraphs 8 and 9 below, a conditional authorization for construction of the other participating projects recommended in your report, including the Minnesota unit of the Paonia project, would be in accord with the program of the President. The authorization would become effective following a new finding of favorable economic justification by the Secretary of the Interior after individual project reports have been prepared which include (a) a joint study with the Department of Agriculture of the direct agricultural benefits of each project; and (b) a reevaluation of the nondirect benefits of each project, based upon a reexamination of the methods presently used to compute the indirect and public benefits of reclamation projects.

The development of irrigation in the upper Colorado River Basin to use the increased supply of water made available as a result of the storage project is recognized as an integral part of the basin plan. Reclamation projects in the upper basin which are economically justified and which represent wise use of available resources in a manner consistent with State water laws and interstate compacts have the full support of the administration. Authorization of the participating projects proposed in your report should be contingent on re-

examination so that there may be no doubt about the economic justification of the projects finally undertaken. Reexamination is particularly necessary in the case of those projects which show a favorable economic justification only if a useful economic life of 100 years is assumed that if the full estimate of indirect and public benefits—the so-called secondary benefits—used in your report is accepted. It is recognized that a basic purpose of the reclamation laws is to spur development of the West. Consequently, it follows that the justification of a reclamation project is not adequately measured by a simple comparison of project costs with the dollar value of the agricultural produce and other goods and services directly produced by the project. However, the procedures used to compute the secondary benefits of the participating projects proposed for authorization would appear to require a fundamental reexamination.

The standards and procedures for the economic appraisal of water resource projects are now under review in the Executive Office. It is expected that any final recommendations made by the Secretary of the Interior would take into account the conclusions reached as a result of this review.

8. Provision should be made in the authorizing legislation for financing the project through a separate revolving fund established in the Treasury which would (a) receive all appropriations for construction and operation and maintenance as advances from the general fund, (b) receive all revenues collected in connection with the operation of the project, (c) be available for the operation and maintenance of the project, subject to such limitations as may be imposed by the Congress in annual appropriation acts, (d) be available for construction in accordance with the appropriations made therefor, (e) provide funds for the payments referred to in paragraph 5 above, and (f) pay to the general fund of the Treasury annually, after completion of any feature or unit, a sum sufficient to return within 50 years, exclusive of authorized development periods, the full reimbursable costs of that unit or feature including interest on the commercial power and municipal water supply investment. It is expected that the interest-bearing and non-interest-bearing investments will be repaid concurrently to the extent practicable.

9. The cost allocations proposed in your report for the storage project and the participating projects should, prior to initiation of construction, be refined and adjusted to conform to the standards and procedures established for use by all agencies at that time. In this connection, it is suggested that Assistant Secretary Aandahl's letter to this Bureau of March 2, 1954, dealing with future refinement of the cost allocation of the storage project be made a part of your report to the Congress.

10. Authorization for a development fund for use in conducting investigations in the basin would not be in accord with the President's program. Existing statutory authority

is adequate for these purposes and the regular general investigations appropriation, rather than the revenues of any project, should be used to finance such investigations.

11. The revolving fund discussed in paragraph 8 above will eliminate the need for a separate continuing fund of \$1 million recommended in your report. The revolving fund will provide the basis for financing operations, maintenance, and emergency work of the project.

12. The necessity for authorization for agencies of the Department other than the Bureau of Reclamation to participate in the project, as your report recommends, is not clear. It would appear that participation by such agencies could be accomplished under the existing authority of each agency, and that work to be performed by these agencies could be financed directly as a part of their regular programs. Participation by these agencies in the basin development should, of course, be coordinated by the Department.

We shall be glad to work with your representatives in the preparation of legislation for authorization of the upper Colorado Basin development which would accord with the conditions set forth above and which could be presented to the Congress as a substitute for S. 1555, H. R. 4443, H. R. 4449, and H. R. 4463.

It is requested that copy of this letter accompany your modified report when it is submitted to the Congress.

Sincerely yours,

(Signed) JOS. M. DODGE,
Director.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., March 31, 1954.

Hon. JOSEPH W. MARTIN, Jr.,
Speaker of the House of Representatives,

MY DEAR MR. SPEAKER: Herewith are my report and findings on the Colorado River Storage project and participating projects, providing for the development and utilization of the water and related resources of the upper Colorado River Basin, submitted pursuant to the Federal reclamation laws. My report consists of the attached supplemental report dated October 1953, as approved and transmitted to the President on December 10, 1953, and as further elaborated and revised by letters of January 15, March 2, and March 19, 1954. There are also attached comments on the report submitted by the various affected States and Federal agencies and a letter, dated March 18, 1954, from the Director of the Bureau of the Budget.

The recommendations contained in my report to the President

of December 10, 1953, are hereby amended to accommodate the views expressed in the letter of March 18, 1954, from the Director of the Bureau of the Budget.

In this connection your attention is invited to the attached press release of March 20, 1954, from the President confirming his official support for the resource development plans proposed for the upper Colorado River Basin and asking that the Congress give early consideration to enactment of legislation to authorize such development.

Sincerely yours,

(Signed) FRED G. AANDAHL,
Assistant Secretary of the Interior.

An act to authorize the Secretary of the Interior to construct, operate, and maintain the Colorado River Storage project and participating projects, and for other purposes. (Act of April 11, 1956, 70 Stat. 105, Public Law 485, 84th Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, in order to initiate the comprehensive development of the water resources of the Upper Colorado River Basin, for the purposes, among others, of regulating the flow of the Colorado River, storing water for beneficial consumptive use, making it possible for the States of the Upper Basin to utilize, consistently with the provisions of the Colorado River Compact, the apportionments made to and among them in the Colorado River Compact and the Upper Colorado River Basin Compact, respectively, providing for the reclamation of arid and semiarid land, for the control of floods, and for the generation of hydroelectric power, as an incident of the foregoing purposes, the Secretary of the Interior is hereby authorized (1) to construct, operate, and maintain the following initial units of the Colorado River Storage project, consisting of dams, reservoirs, powerplants, transmission facilities and appurtenant works: Curecanti, Flaming Gorge, Navajo (dam and reservoir only), and Glen Canyon: Provided, That the Curecanti Dam shall be constructed to a height which will impound not less than nine hundred and forty thousand acre-feet of water or will create a reservoir of such greater capacity as can be obtained by a high waterline located at seven thousand five hundred and twenty feet above mean sea level, and that construction thereof shall not be undertaken until the Secretary has, on the basis of further engineering and economic investigations, reexamined the economic justification of such unit and, accompanied by appropriate documentation in the form of a supplemental report, has certified to the Congress and to the President that, in his judgment, the benefits of such unit will exceed its costs; and (2) to construct, operate, and maintain the following additional reclamation projects (including power-generating and transmission facilities related thereto), hereinafter referred to as participating projects: Central Utah (initial phase); Emery County, Florida, Hammond, La Barge, Lyman, Paonia (including the Minnesota unit, a dam and reservoir on

Muddy Creek just above its confluence with the North Fork of the Gunnison River, and other necessary works), Pine River Extension, Seedska-dee, Silt and Smith Fork: *Provided further*, That as part of the Glen Canyon Unit the Secretary of the Interior shall take adequate protective measures to preclude impairment of the Rainbow Bridge National Monument.

SEC. 2. In carrying out further investigations of projects under the Federal reclamation laws in the Upper Colorado River Basin, the Secretary shall give priority to completion of planning reports on the Gooseberry, San Juan-Chama, Navajo, Parshall, Troublesome, Rabbit Ear, Eagle Divide, San Miguel, West Divide, Bluestone, Battlement Mesa, Tomichi Creek, East River, Ohio Creek, Fruitland Mesa, Bostwick Park, Grand Mesa, Dallas Creek, Savery-Pot Hook, Dolores, Fruit Growers Extension, Animas-La Plata, Yellow Jacket, and Sublette participating projects. Said reports shall be completed as expeditiously as funds are made available therefor and shall be submitted promptly to the affected States, which in the case of the San Juan-Chama project shall include the State of Texas, and thereafter to the President and the Congress: *Provided*, That with reference to the plans and specifications for the San Juan-Chama project, the storage for control and regulation of water imported from the San Juan River shall (1) be limited to a single offstream dam and reservoir on a tributary of the Chama River, (2) be used solely for control and regulation and no power facilities shall be established, installed or operated thereat, and (3) be operated at all times by the Bureau of Reclamation of the Department of the Interior in strict compliance with the Rio Grande Compact as administered by the Rio Grande Compact Commission. The preparation of detailed designs and specifications for the works proposed to be constructed in connection with projects shall be carried as far forward as the investigations thereof indicate is reasonable in the circumstances.

The Secretary, concurrently with the investigations directed by by the preceding paragraph, shall also give priority to completion of a planning report on the Juniper project.

SEC. 3. It is not the intention of Congress, in authorizing only those projects designated in section 1 of this Act, and in authorizing priority in planning only those additional projects designated in section 2 of this Act, to limit, restrict, or otherwise interfere with such comprehensive development as will provide for the consumptive use by States of the Upper Colorado River Basin of waters, the use of which is apportioned to the Upper Colorado River Basin by the Colorado River Compact and to each State thereof by the Upper Colorado River Basin Compact, nor to preclude consideration and authorization by the Congress of additional projects under the allocations in the compacts as additional needs are indicated. It is the intention of Congress that no dam or reservoir constructed under the authorization of this Act shall be within any national park or monument.

SEC. 4. Except as otherwise provided in this Act, in constructing, operating, and maintaining the units of the Colorado River Storage project and the participating projects listed in section 1

of this Act, the Secretary shall be governed by the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto): *Provided*, That (a) irrigation repayment contracts shall be entered into which, except as otherwise provided for the Paonia and Eden projects, provide for repayment of the obligation assumed thereunder with respect to any project contract unit over a period of not more than fifty years exclusive of any development period authorized by law; (b) prior to construction of irrigation distribution facilities, repayment contracts shall be made with an "organization" as defined in paragraph 2 (g) of the Reclamation Project Act of 1939 (53 Stat. 1187) which has the capacity to levy assessments upon all taxable real property located within its boundaries to assist in making repayments, except where a substantial proportion of the lands to be served are owned by the United States; (c) contracts relating to municipal water supply may be made without regard to the limitations of the last sentence of section 9 (c) of the Reclamation Project Act of 1939; and (d), as to Indian lands within, under or served by any participating project, payment of construction costs within the capability of the land to repay shall be subject to the Act of July 1, 1932 (47 Stat. 564): *Provided further*, That for a period of ten years from the date of enactment of this Act, no water from any participating project authorized by this Act shall be delivered to any water user for the production on newly irrigated lands of any basic agricultural commodity, as defined in the Agricultural Act of 1949, or any amendment thereof, if the total supply of such commodity for the marketing year in which the bulk of the crop would normally be marketed is in excess of the normal supply as defined in section 301 (b) (10) of the Agricultural Adjustment Act of 1938, as amended, unless the Secretary of Agriculture calls for an increase in production of such commodity in the interest of national security. All units and participating projects shall be subject to the apportionments of the use of water between the Upper and Lower Basins of the Colorado River and among the States of the Upper Basin fixed in the Colorado River Compact and the Upper Colorado River Basin Compact, respectively, and to the terms of the treaty with the United Mexican States (Treaty Series 994).

SEC. 5. (a) There is hereby authorized a separate fund in the Treasury of the United States to be known as the Upper Colorado River Basin Fund (hereinafter referred to as the Basin Fund), which shall remain available until expended, as hereafter provided, for carrying out provisions of this Act other than section 8.

(b) All appropriations made for the purpose of carrying out the provisions of this Act, other than section 8, shall be credited to the Basin Fund as advances from the general fund of the Treasury.

(c) All revenues collected in connection with the operation of the Colorado River Storage project and participating projects shall be credited to the Basin Fund, and shall be available, without further appropriation, for (1) defraying the costs of operation, maintenance, and replacements of, and emergency expenditures

for, all facilities of the Colorado River Storage project and participating projects, within such separate limitations as may be included in annual appropriation acts: *Provided*, That with respect to each participating project, such costs shall be paid from revenues received from each such project; (2) payment as required by subsection (d) of this section; and (3) payment as required by subsection (e) of this section. Revenues credited to the Basin Fund shall not be available for appropriation for construction of the units and participating projects authorized by or pursuant to this Act.

(d) Revenues in the Basin Fund in excess of operating needs shall be paid annually to the general fund of the Treasury to return—

(1) the costs of each unit, participating project, or any separable feature thereof which are allocated to power pursuant to section 6 of this Act, within a period not exceeding fifty years from the date of completion of such unit, participating project, or separable feature thereof;

(2) the costs of each unit, participating project, or any separable feature thereof which are allocated to municipal water supply pursuant to section 6 of this Act, within a period not exceeding fifty years from the date of completion of such unit, participating project, or separable feature thereof;

(3) interest on the unamortized balance of the investment (including interest during construction) in the power and municipal water supply features of each unit, participating project, or any separable feature thereof, at a rate determined by the Secretary of the Treasury as provided in subsection (f), and interest due shall be a first charge; and

(4) the costs of each storage unit which are allocated to irrigation pursuant to section 6 of this Act within a period not exceeding fifty years.

(e) Revenues in the Basin Fund in excess of the amounts needed to meet the requirements of clause (1) of subsection (c) of this section, and to return to the general fund of the Treasury the costs set out in subsection (d) of this section, shall be apportioned among the States of the Upper Division in the following percentages: Colorado, 46 per centum; Utah, 21.5 per centum; Wyoming, 15.5 per centum; and New Mexico, 17 per centum: *Provided*, That prior to the application of such percentages, all revenues remaining in the Basin Fund from each participating project (or part thereof), herein or hereinafter authorized, after payments, where applicable, with respect to such projects, to the general fund of the Treasury under subparagraphs (1), (2), and (3) of subsection (d) of this section shall be apportioned to the State in which such participating project, or part thereof, is located.

Revenues so apportioned to each State shall be used only for the repayment of construction costs of participating projects or parts of such projects in the State to which such revenues are apportioned and shall not be used for such purpose in any other State

without the consent, as expressed through its legally constituted authority, of the State to which such revenues are apportioned. Subject to such requirement, there shall be paid annually into the general fund of the Treasury from the revenues apportioned to each State (1) the costs of each participating project herein authorized (except Paonia) or any separable feature thereof, which are allocated to irrigation pursuant to section 6 of this Act, within a period not exceeding fifty years, in addition to any development period authorized by law, from the date of completion of such participating project or separable feature thereof, or, in the case of Indian lands, payment in accordance with section 4 of this Act; (2) costs of the Paonia project, which are beyond the ability of the water users to repay, within a period prescribed in the Act of June 25, 1947 (61 Stat. 181); and (3) costs in connection with the irrigation features of the Eden project as specified in the Act of June 28, 1949 (63 Stat. 277).

(f) The interest rate applicable to each unit of the storage project and each participating project shall be determined by the Secretary of the Treasury as of the time the first advance is made for initiating construction of said unit or project. Such interest rate shall be determined by calculating the average yield to maturity on the basis of daily closing market bid quotations during the month of June next preceding the fiscal year in which said advance is made, on all interest-bearing marketable public debt obligations of the United States having a maturity date of fifteen or more years from the first day of said month, and by adjusting such average annual yield to the nearest one-eighth of 1 per centum.

(g) Business-type budgets shall be submitted to the Congress annually for all operations financed by the Basin Fund.

SEC. 6. Upon completion of each unit, participating project or separable feature thereof, the Secretary shall allocate the total costs (excluding any expenditures authorized by section 8 of this Act) of constructing said unit, project or feature to power, irrigation, municipal water supply, flood control, navigation, or any other purposes authorized under reclamation law. Allocations of construction, operation and maintenance costs to authorized non-reimbursable purposes shall be nonreturnable under the provisions of this Act. In the event that the Navajo participating project is authorized, the costs allocated to irrigation of Indian-owned tribal or restricted lands within, under, or served by such project, and beyond the capability of such lands to repay, shall be determined, and, in recognition of the fact that assistance to the Navajo Indians is the responsibility of the entire nation, such costs shall be nonreimbursable. On January 1 of each year the Secretary shall report to the Congress for the previous fiscal year, beginning with the fiscal year 1957, upon the status of the revenues from, and the cost of, constructing, operating, and maintaining the Colorado River Storage project and the participating projects. The Secretary's report shall be prepared to reflect accurately the Federal investment allocated at that time to power, to irrigation, and to other purposes, the progress of return and repayment thereon, and the

estimated rate of progress, year by year, in accomplishing full repayment.

SEC. 7. The hydroelectric powerplants and transmission lines authorized by this Act to be constructed, operated, and maintained by the Secretary shall be operated in conjunction with other Federal powerplants, present and potential, so as to produce the greatest practicable amount of power and energy that can be sold at firm power and energy rates, but in the exercise of the authority hereby granted he shall not affect or interfere with the operation of the provisions of the Colorado River Compact, the Upper Colorado River Basin Compact, the Boulder Canyon Project Act, the Boulder Canyon Project Adjustment Act and any contract lawfully entered unto [sic] under said Compacts and Acts. Subject to the provision of the Colorado River Compact, neither the impounding nor the use of water for the generation of power and energy at the plants of the Colorado River Storage project shall preclude or impair the appropriation of water for domestic or agricultural purposes pursuant to applicable State law.

SEC. 8. In connection with the development of the Colorado River Storage project and of the participating projects, the Secretary is authorized and directed to investigate, plan, construct, operate, and maintain (1) public recreational facilities on lands withdrawn or acquired for the development of said project or of said participating projects, to conserve the scenery, the natural, historic and archeologic objects, and the wildlife on said lands, and to provide for public use and enjoyment of the same and of the water areas created by these projects by such means as are consistent with the primary purposes of said projects; and (2) facilities to mitigate losses of, and improve conditions for, the propagation of fish and wildlife. The Secretary is authorized to acquire lands and to withdraw public lands from entry or other disposition under the public land laws necessary for the construction, operation, and maintenance of the facilities herein provided, and to dispose of them to Federal, State, and local governmental agencies by lease, transfer, exchange, or conveyance upon such terms and conditions as will best promote their development and operation in the public interest. All costs incurred pursuant to this section shall be nonreimbursable and nonreturnable.

SEC. 9. Nothing contained in this Act shall be construed to alter, amend, repeal, construe, interpret, modify, or be in conflict with the provisions of the Boulder Canyon Project Act (45 Stat. 1057), the Boulder Canyon Project Adjustment Act (54 Stat. 774), the Colorado River Compact, the Upper Colorado River Basin Compact, the Rio Grande Compact of 1938, or the Treaty with the United Mexican States (Treaty Series 994).

SEC. 10. Expenditures for the Flaming Gorge, Glen Canyon, Curecanti, and Navajo initial units of the Colorado River Storage project may be made without regard to the soil survey and land classification requirements of the Interior Department Appropriation Act, 1954.

SEC. 11. The Final Judgment, Final Decree and stipulations incorporated therein in the consolidated cases of United States of

America v. Northern Colorado Water Conservancy District, et al., Civil Nos. 2782, 5016 and 5017, in the United States District Court for the District of Colorado, are approved, shall become effective immediately, and the proper agencies of the United States shall act in accordance therewith.

SEC. 12. There are hereby authorized to be appropriated, out of any moneys in the Treasury not otherwise appropriated, such sums as may be required to carry out the purposes of this Act, but not to exceed \$760,000,000.

SEC. 13. In planning the use of, and in using credits from, net power revenues available for the purpose of assisting in the pay-out of costs of participating projects herein and hereafter authorized in the States of Colorado, New Mexico, Utah, and Wyoming, the Secretary shall have regard for the achievement within each of said States of the fullest practicable use of the waters of the Upper Colorado River system, consistent with the apportionment thereof among such States.

SEC. 14. In the operation and maintenance of all facilities, authorized by Federal law and under the jurisdiction and supervision of the Secretary of the Interior, in the basin of the Colorado River, the Secretary of the Interior is directed to comply with the applicable provisions of the Colorado River Compact, the Upper Colorado River Basin Compact, the Boulder Canyon Project Act, the Boulder Canyon Project Adjustment Act, and the Treaty with the United Mexican States, in the storage and release of water from reservoirs in the Colorado River Basin. In the event of the failure of the Secretary of the Interior to so comply, any State of the Colorado River Basin may maintain an action in the Supreme Court of the United States to enforce the provisions of this section, and consent is given to the joinder of the United States as a party in such suit or suits, as a defendant or otherwise.

SEC. 15. The Secretary of the Interior is directed to continue studies and to make a report to the Congress and to the States of the Colorado River Basin on the quality of water of the Colorado River.

SEC. 16. As used in this Act—

The terms "Colorado River Basin", "Colorado River Compact", "Colorado River System", "Lee Ferry", "States of the Upper Division", "Upper Basin", and "domestic use" shall have the meaning ascribed to them in article II of the Upper Colorado River Basin Compact;

The term "States of the Upper Colorado River Basin" shall mean the States of Arizona, Colorado, New Mexico, Utah, and Wyoming;

The term "Upper Colorado River Basin" shall have the same meaning as the term "Upper Basin";

The term "Upper Colorado River Basin Compact" shall mean that certain compact executed on October 11, 1948 by commissioners representing the States of Arizona, Colorado, New Mexico, Utah, and Wyoming, and consented to by the Congress of the United States of America by Act of April 6, 1949 (63 Stat. 31);

The term "Rio Grande Compact" shall mean that certain com-

pact executed on March 18, 1938, by commissioners representing the States of Colorado, New Mexico, and Texas and consented to by the Congress of the United States of America by Act of May 31, 1939 (53 Stat. 785) ;

The term "Treaty with the United Mexican States" shall mean that certain treaty between the United States of America and the United Mexican States, signed at Washington, District of Columbia, February 3, 1944, relating to the utilization of the waters of the Colorado River and other rivers, as amended and supplemented by the protocol dated November 14, 1944, and the understandings recited in the Senate resolution of April 18, 1945, advising and consenting to ratification thereof.

COLUMBIA BASIN PROJECT

WASHINGTON

The Columbia Basin project (Grand Coulee Dam project) was authorized by section 2 of the Rivers and Harbors Act of August 30, 1935 (49 Stat. 1039), and in accordance with the provisions of that act the President on January 29, 1936, designated the Secretary of the Interior as his agent to construct, operate, and maintain the project. It was reauthorized as a project subject to the Reclamation Act of 1939 by the act of March 10, 1943 (57 Stat. 14). Generating units R-7, R-8, and R-9 for Grand Coulee power plant were authorized by the Secretary on February 8, 1949, and his report thereon was transmitted to the President and the Congress on January 5, 1949.

BUREAU OF RECLAMATION,
Denver, Colorado, January 7, 1932.

From: CHIEF ENGINEER.
To: Commissioner, Washington, D. C.
Subject: Report on proposed Columbia Basin project, Washington.

1. Transmitted herewith is a report prepared in the Denver office on the proposed Columbia Basin project.

2. The report shows that the investment in the dam and power plant will be repaid under the conditions assumed in 50 years with interest at 4 per cent and leave a substantial surplus for repaying about one half of the investment without interest ultimately required in the entire irrigation development. With this surplus power revenue available for liquidating a portion of the investment in the irrigation development, and on the basis of the estimates and conclusions reached in the report, I believe the Columbia Basin project is physically and financially feasible. With the completion of the power development the irrigation development may proceed at such time and in units of such size as economic conditions may justify.

3. The postponement of the irrigation development will in-

crease, rather than detract, from the economic feasibility of the power development except as such irrigation development affects the power market.

(Signed) - R. F. WALTER,
Chief Engineer.

RIVERS AND HARBORS ACT OF 1935

[Extract from] An act authorizing the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes. (Act of August 30, 1935, 49 Stat. 1028, 1039-1040, Public Law 409, 74th Cong., 1st sess.)

* * * SEC. 2. That for the purpose of controlling floods, improving navigation, regulating the flow of the streams of the United States, providing for storage and for the delivery of the stored waters thereof, for the reclamation of public lands and Indian reservations, and other beneficial uses, and for the generation of electric energy as a means of financially aiding and assisting such undertakings, the projects known as "Parker Dam" on the Colorado River and "Grand Coulee Dam" on the Columbia River, are hereby authorized and adopted, and all contracts and agreements which have been executed in connection therewith are hereby validated and ratified, and the President, acting through such agents as he may designate, is hereby authorized to construct, operate, and maintain dams, structures, canals, and incidental works necessary to such projects, and in connection therewith to make and enter into any and all necessary contracts including contracts amendatory of or supplemental to those hereby validated and ratified. The construction by the Secretary of the Interior of a dam in and across the Colorado River at or near Head Gate Rock, Arizona, and structures, canals, and incidental works necessary in connection therewith is hereby authorized, and none of the waters, conserved, used, or appropriated under the works hereby authorized shall be charged against the waters allocated to the upper basin by the Colorado River compact; nor shall any priority be established against such upper basin by reason of such conservation, use, or appropriation; nor shall said dam, structures, canals, and works, or any of them, be used as the basis of making any such charge, or establishing any such priority or right, and all contracts between the United States and the users of said water from or by means of said instrumentalities shall provide against the making of any such charge or claim or the establishment of any priority right or claim to any part or share of the water of the Colorado River allocated to the Upper Basin by the Colorado River compact, and all use of said instrumentalities shall be in compliance with the conditions and provisions of said Colorado River compact and the Boulder Canyon Project Act.

THE WHITE HOUSE,
Washington, January 29, 1936.

Hon. HAROLD L. ICKES,
Secretary of the Interior,
Washington, D. C.

MY DEAR MR. SECRETARY: Section 2 of the Act of Congress of August 30, 1935 (Public No. 400, 74th Congress) provides as follows:

SEC. 2. That for the purpose of controlling floods, improving navigation, regulating the flow of the streams of the United States, providing for storage and for the delivery of the stored waters thereof, for the reclamation of public lands and Indian reservations, and other beneficial uses, and for the generation of electric energy as a means of financially aiding and assisting such undertakings, the projects known as "Parker Dam" on the Colorado River and "Grand Coulee Dam" on the Columbia River, are hereby authorized and adopted, and all contracts and agreements which have been executed in connection therewith are hereby validated and ratified, and the President, acting through such agents as he may designate, is hereby authorized to construct, operate, and maintain dams, structures, canals, and incidental works necessary to such projects, and in connection therewith to make and enter into any and all necessary contracts including contracts amendatory of or supplemental to those hereby validated and ratified. The construction by the Secretary of the Interior of a dam in and across the Colorado River at or near Head Gate Rock, Arizona, and structures, canals, and incidental works necessary in connection therewith is hereby authorized, and none of the waters, conserved, used, or appropriated under the works hereby authorized shall be charged against the water allocated to the upper basin by the Colorado River compact, nor shall any priority be established against such upper basin by reason of such conservation, use, or appropriation; nor shall said dam, structures, canals, and works, or any of them, be used as the basis of making any such charge, or establishing any such priority or right, and all contracts between the United States and the users of said water from or by means of said instrumentalities shall provide against the making of any such charge or claim or the establishment of any priority right or claim to any part or share of the water of the Colorado River allocated to the Upper Basin by the Colorado River compact, and all use of said instrumentalities shall be in compliance with the conditions and provisions of said Colorado River compact and the Boulder Canyon Project Act.

Under the foregoing provision of law, you, through the Bureau of Reclamation under your jurisdiction, are hereby designated as my agent (1) to construct, operate and maintain dams, structures, canals and incidental works necessary to said Parker Dam and Grand Coulee Dam projects, and (2) in connection therewith to make and enter into any and all necessary contracts including contracts amendatory of or supplemental to those validated under the above-quoted provision of law. Such contracts may be made by you, by the Acting Secretary, by the First Assistant Secretary, by the Under Secretary, or by the Assistant Secretary as you may

direct, or by such officers of the Bureau of Reclamation as you may designate, and any such contracts made between August 30, 1935, and the date hereof are hereby ratified and any construction work done by or under the Bureau of Reclamation during said period upon said dams, structures, canals and incidental works is hereby adopted.

Sincerely yours,

(Signed) FRANKLIN D. ROOSEVELT,
President.

PREVENTION LAND SPECULATION, COLUMBIA BASIN PROJECT

An act to prevent speculation in lands in the Columbia Basin prospectively irrigable by reason of the construction of the Grand Coulee Dam project and to aid actual settlers in securing such lands at the fair appraised value thereof as arid land, and for other purposes. (Act of May 27, 1937, 50 Stat. 208, Public Law 117, 75th Cong., 1st sess.)

That no part of the funds heretofore or hereafter appropriated or allotted for the construction of the Grand Coulee Dam project (authorized by section 2 of the Act of August 30, 1935, 49 Stat. 1028, 1039, entitled "An Act authorizing the construction, repair, and preservation of certain public works on rivers and harbors and for other purposes," and by the Act of June 22, 1936, 49 Stat. 1757, 1784, entitled "An Act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1937, and for other purposes") or for the reclamation of land in connection with said project shall be expended in the construction of any irrigation feature of said project, exclusive of Grand Coulee Dam and appurtenant works now under construction, until after the following provisions have been complied with:

(a) The privately owned lands proposed to be irrigated under said project (including county lands and such State lands as the State may desire and be able to subscribe for irrigation under said project and to subject to the terms of this Act) shall have been impartially appraised in a manner and to the extent prescribed by the Secretary of the Interior for the determination of their value at the date of appraisal without reference to the proposed construction of the said irrigation works and without increment on account of the prospect of the construction of the said project.

(b) A contract or contracts shall have been made with an irrigation or reclamation district or districts organized under State law providing for payment by the district or districts of that part of the cost of construction of the project allocated by the Secretary of the Interior as the part thereof properly chargeable to irrigation, the said cost of construction to be repaid within such term or terms of years as the Secretary shall find to be necessary, not

to exceed the maximum term permitted under the Federal reclamation laws, the payments to be made in the manner and subject to the terms and conditions provided in the said reclamation laws and subject to enforcement by all of the means and remedies provided in the Reclamation Act of June 17, 1902 (32 Stat. 388), and Acts supplementary thereto or amendatory thereof: *Provided*, That every such contract with any district shall further require that all irrigable land held in private ownership by any one owner in excess of forty irrigable acres and all county and State lands which may be subscribed to or irrigated under the said project shall be designated as excess land and as such shall not be entitled to receive water from said project. The contract shall provide further that no owner of such excess lands in the said project shall receive water therefrom for any part of the lands owned by him if and so long as he shall refuse to sell any excess lands owned or held by him under terms and conditions satisfactory to the Secretary of the Interior and at prices fixed in the appraisals made and approved as hereinabove provided. The Secretary of the Interior may require each landowner, as a condition precedent to receiving water from the said irrigation works, to execute a valid recordable contract wherein he shall agree to dispose of excess holdings then or thereafter owned by him in the manner provided in this Act and in the contract between his district and the United States, and wherein the said landowner also shall confer upon the Secretary of the Interior an irrevocable power of attorney to make any such sale on his behalf. For the purpose of determining excess lands under the provisions of this Act husband and wife shall be considered separate persons and each may hold not to exceed forty irrigable acres as nonexcess lands or husband and wife together may hold eighty irrigable acres of community property as such nonexcess lands: *Provided further*, That as to any part of the irrigable lands of the said project for which the Secretary of the Interior shall determine that farm units of less than forty irrigable acres would be sufficient to support a family, he may approve and cause to be filed farm unit plats establishing farm units of less than forty acres but not less than ten acres and in that event all lands held in any one ownership in excess of one farm unit as shown on such plat shall be considered excess lands subject to the provisions of this Act applicable to excess lands: *Provided further*, That in addition to the foregoing provisions, every such contract with any district shall also provide, with respect to all irrigable lands whether initially excess or nonexcess, that whenever any land is sold at a price in excess of the sum of the appraised value of the arid land, the appraised value of improvements made thereon after the date of the original appraisal, and the amount of irrigation construction costs actually paid for that land, then, before the new owner shall be entitled to receive water from the project, a proportionate part of the said excess or incremented value shall be paid to the United States as follows: If such payment is made to the United States more than fifty months after such sale at an excessive price has been made, then as a prerequisite to the right to receive water all of the incremented value shall be

paid to the United States to apply on construction installments to come due on such land in inverse order of their accrual; if payment is made in less than fifty months but more than forty-nine months after the date of such sale, then 99 per centum of such incremented value or excess of sale price shall be thus paid and applied; if payment is made in less than forty-nine but more than forty-eight months after date of such sale, then 98 per centum of such incremented value or excess of sale price shall be thus paid and applied, and so on for earlier payment allowing an additional reduction of 1 per centum for each month, so that in the event that such payment is made to the United States within one month after the date of such sale, then the percentage of the incremented value required to be paid to the United States for application to construction costs as a prerequisite to the right to receive water shall be 50 per centum thereof: *Provided further*, That each district contract may include a provision which, subject to authorization and validation thereof by the State of Washington, shall require that all irrigable lands which are allowed by the owners thereof without objection to remain in such district until after the judicial confirmation of the organization of the district and of the regularity and validity of said contract and the proceedings authorizing it shall be considered as automatically subjected to the provisions of the excess land clauses and incremented value clauses hereinbefore provided for, such obligation to be impressed on the title to the land and to be considered equivalent to a covenant running with the land. The said provision, however, shall not apply to any landowner who, prior to the entry of the judicial decree of confirmation, shall file with the district and duly record as an instrument affecting title to his land, a notice of his objection to the said obligation and of his renunciation of the right of the said land to receive water through, from, or by means of any works constructed by the United States in connection with such project: *And provided further*, That the foregoing four provisos shall not apply to any lands in the State of Washington which have already been developed and are now being cultivated with the aid of water from sources other than the said Grand Coulee project and for which additional water may be desired.

(c) The State of Washington by appropriate legislation shall have authorized, adopted, ratified, and consented to all the provisions of this Act insofar as such provisions or any of them, in whole or in part, may come within the scope of State jurisdiction or authority or be applicable to State lands.

SEC. 2. The Secretary of the Interior is authorized to use not to exceed \$350,000 of the funds hereafter appropriated or allotted for the fiscal year 1938 for the said project for the purpose of the survey, investigation, and appraisal of the irrigable lands of the said project and for surveys, investigations, plans, and designs for the irrigation works therefor.

SEC. 3. The Secretary of the Interior is authorized to make such rules and regulations and to include in the contracts hereinbefore provided for such provisions as may be appropriate and

useful for the purpose of carrying out the purpose and provisions of this Act.

SEC. 4. The consent of the United States is hereby given to the sale of school lands and any other public lands of the State of Washington which may be included in any irrigation or reclamation project to which this Act is or may be applicable at prices not to exceed the appraised valuation thereof, determined as herein provided.

THE COLUMBIA BASIN PROJECT ACT

[Extract from] An act to amend the act approved May 27, 1937 (ch. 269, 50 Stat. 208), by providing substitute and additional authority for the prevention of speculation in lands of the Columbia Basin project, and substitute and additional authority related to the settlement and development of the project, and for other purposes. (Act of March 10, 1943, 57 Stat. 14, Public Law 8, 78th Cong., 1st sess.)

* * * That the Act of May 27, 1937 (ch. 269, 50 Stat. 208), is hereby amended to read as follows:

SEC. 1. In addition to the primary purposes for which the Grand Coulee Dam project (hereafter to be known as the Columbia Basin project and herein called the "project") was authorized under the provisions of the Act of August 30, 1935 (49 Stat. 1028), the project is hereby authorized and reauthorized as a project subject to the Reclamation Project Act of 1939; and the provisions of each of those two Acts together with the provisions of this Act shall govern the repayment of expenditures and the construction, operation, and maintenance of the works constructed as a part of the project.

SEC. 2. (a) No part of the funds heretofore or hereafter appropriated or allotted for project construction or for the reclamation of land within the project shall be expended in the construction of any irrigation features of the project, exclusive of Grand Coulee Dam and appurtenant works now under construction and of the pumping plant and equalizing reservoir and dams, until the requirements of the following subdivisions (i) and (ii) of this subsection (a) have been met:

(i) All lands within the project shall have been impartially appraised by the Secretary of the Interior (hereinafter called the "Secretary") and evaluated at the date of appraisal without reference to or increment on account of the construction of the project. Reappraisals may be made at any time by the Secretary, and will be made upon the request of the landowner concerned accompanied by an advance to the United States of \$15 for each quarter section or fraction thereof involved, on account of expense thereof. In such reappraisals the Secretary shall take into account, in addition to the value found in the first appraisal, improvements made after said appraisals, such irrigation construction charges

on the land as have been paid, and other items of value that are proper, other than increments on account of the construction of the project. The term "appraised value" as used in this Act shall mean appraised values determined as provided in this subsection.

(ii) Contracts shall have been made with irrigation, reclamation, or conservancy districts organized under State law embracing the lands within the project providing for payment thereby of that part of the cost of construction of the project determined by the Secretary to be the part thereof to be repaid by irrigation. Each such contract shall conform to the requirements of this Act, shall require repayment within the maximum period permitted under the Act of June 17, 1902 (32 Stat. 388), and Acts amendatory thereof or supplementary thereto (hereinafter called the Federal reclamation laws), and provide that payments shall be enforceable by all means and remedies provided in said laws.

(b) (i) The lands within the project shall be developed in irrigation blocks, as that term is defined in the Reclamation Project Act of 1939. The Secretary shall segregate the lands in each irrigation block into farm units of sufficient acreage for the support of an average-sized family at a suitable living level, having in mind the character of soil, topography, location with respect to the irrigation system, and such other relevant factors as, in his judgment, enter into the determination of the area and boundaries thereof; and shall establish the units as hereafter provided. No farm unit shall contain more than one hundred and sixty or less than ten acres of irrigable land, except that any nominal quarter section comprising more than one hundred and sixty acres of irrigable land may be included in one farm unit, and except that lands owned by the United States may be established into units of lesser size for part-time farming purposes.

(ii) Prior to the initial delivery of water to an irrigation block, the Secretary shall prepare a plat of all the farm units in the irrigation block and shall publish a notice of the intention to establish such farm unit plat in six weekly issues of a newspaper of general circulation in the county or counties in which any part of the irrigation block is located. From the date of first publication, a copy of the plat shall be available in the county auditor's office of each of said counties for public inspection during the business hours of the office. Any interested landowner shall have the right to file written objections to the plat with the county auditor of the county in which his lands are situated before the close of the period of publication. After expiration of the period of publication the Secretary shall consider and determine all such objections, draw the plat in final form and file it for record in said county auditors' offices. With the consent of the owners of all farm units affected, the Secretary may revise the plat or any part thereof from time to time, and place the revisions of record with the original plat.

(iii) Water shall not be delivered from, through, or by means of the project works to or for lands not conforming in area and boundaries to the farm units covering the lands involved, nor to or for more than one farm unit held by any one landowner, except

that as to lands held by the one having equitable or legal title on May 27, 1937, or the heir or devisee of such owner, delivery may be made to or for a total irrigable area not exceeding the maximum provided in this section. The limitations of this subdivision shall not apply to lands owned by the United States or any agency or instrumentality thereof, corporate or otherwise.

(iv) Lands within the project in excess of one farm unit held by any one landowner shall, except as otherwise provided in this Act, be deemed excess land: *Provided*, That if excess land is acquired by foreclosure or other process of law, by conveyance in satisfaction of mortgages, by inheritance or by devise, water therefor may be furnished temporarily for a period not exceeding five years from the effective date of such acquisition, delivery of water thereafter ceasing until the transfer thereof to a landowner duly qualified to secure water therefor.

(v) As used in this Act, the terms 'owner', 'landowner', and 'any one landowner' denote any person, corporation, joint-stock association, or family; the term 'family' denotes a group consisting of either or both husband and wife, together with their children under eighteen years of age, or all of such children if both parents are dead; the term 'their children' includes the issue and lawfully adopted children of either or both husband and wife; and the term 'lands within the project' denotes those lands within the boundaries of the existing Columbia Basin irrigation districts, or revisions thereof approved by the Secretary, which the Secretary determines may be supplied water from, through, or by means of the project works and are required to be included to provide for sound development and operation of the project. Lands shall be deemed to be held by a family, if held as separate property of husband or wife, or constitute a part or all of their community property, or if they are the property of any or all of their children under eighteen years of age.

(c) As a condition precedent to receiving water from the project and in consideration thereof, each landowner shall be required to execute, within six months from the date of the execution of the contract between the United States and the district within which the land is located, a recordable contract covering all his lands within that district, agreeing as to such lands for and on behalf of himself, his heirs, successors, and assigns to the provisions set forth in this subsection (c): *Provided*, That any landowner, having failed to execute such a contract within this period, may be permitted to execute such contract within one year after the date of judicial confirmation of the validity of the contract between the United States and the district but only in accordance with such rules and regulations as may be prescribed under section 8 concerning this privilege.

Each such recordable contract shall provide—

(i) That the landowner will conform his lands by purchase, sale, or exchange at the appraisal values to the area and boundaries of the pertinent farm unit or units shown on the plats filed under subsection 2 (b) and will dispose of excess land then or thereafter owned by him at its appraised value; that the Secretary

is thereby given an irrevocable power of attorney to sell in behalf of the landowner any such excess land at said appraised value; and that the United States is thereby given, without further consideration, an option to buy any such excess land at said appraised value: *Provided*, That sales under such power or such option, unless otherwise provided in writing by said owner, shall be only for cash and only such that surrender of possession by the owner of any area of excess lands then operated as a single unit for dry farming or grazing may be effected substantially at one time.

(ii) That in the period from the date of execution thereof and to a date five years from the time water becomes available for the lands covered thereby, no conveyance of or contract to convey a free-hold estate in such lands, whether excess or nonexcess lands, shall be made for a consideration exceeding its appraised value, and in connection with any conveyance of, or contract to convey, such an estate within such period the grantor or vendor or the grantee or vendee or any lien holder thereof shall, within thirty days from the date of such conveyance or contract, file in the office of the county auditor in the county or counties in which the land is located an affidavit describing the conveyance or contract and the consideration therefor.

(iii) That in the event that within such period such a conveyance of, or contract to convey, is made without filing within said thirty days the affidavit required in (ii) of this subsection, or is made for a consideration in excess of the appraised value, the Secretary, at any time within two years of the day on which there is filed for recording in the official county records the contract or deed involved, whichever is filed earliest in the event both the contract and deed are filed in a given transaction, may cancel the right of such estate to receive water from, through, or by means of the project works by a written notice of cancelation: *Provided*, That said power to cancel as to any given parcel of land may be waived by the Secretary at any time within said two-year period by a written notice of waiver: *And provided further*, That after any such cancelation a project water right for the estate involved may be acquired only on terms and conditions satisfactory to the Secretary.

(iv) That should any freehold estate in land covered thereby be conveyed or contracted to be conveyed within the period defined in (ii) of this subsection, the transaction, and any mortgage or other lien covering any deferred consideration thereunder, shall be subject to all the provisions of subsection 3 (b) hereof.

Any or all of the provisions of this subsection (c) required to be included in the recordable contracts may be made covenants running with the land when said recordable contracts expressly so provide.

(d) Each contract made pursuant to subdivision 2 (a) (ii) shall provide that no water will be delivered from, through, or by means of the project works except in accordance with the provisions and limitations of section 2 hereof.

(e) Each district contract may include provisions—

(i) Requiring that all lands within the district not covered by

recordable contracts provided for under subsection (c) or otherwise not eligible to receive water shall be subject to assessment in the same manner and to the same extent as like lands eligible to receive water, subject to such provisions as the Secretary may prescribe for postponement in payment of all or part of such assessments but not beyond the expiration of the period during which the price limit under subsection 2 (c) applies.

(ii) That, without compliance with other provision of State law for the exclusion of lands, lands may be withdrawn from the district by filing a written notice of withdrawal with the district board on or before such date fixed by such board between a date ten days after the official notice of the election on the contract between the United States and the district and the date of such election. The date limiting the time of such filing shall be announced in the official notice of the proposed election, and lands for which such notice is filed shall be deemed excluded from the district for all purposes as of the time of such filing. Thereafter lands so withdrawn and excluded so long as they remain in private ownership shall not be entitled to receive water from, through, or by means of the project works.

(f) Any instrument, action, determination, rule, or regulation of the Secretary or his duly authorized representatives under the authority of this section 2 which is or may be determinative of the title to lands or interest in lands in private ownership within the project shall be effective as to any given parcel of land, as against purchasers for value without actual notice, only from the time of the filing for record in the office of the county auditor of the county or counties in which the lands affected are located of a copy thereof authenticated in the manner authorized by law. Such filing shall impart legal notice to the public of the matters and things set out therein.

SEC. 3 (a) Fraudulent misrepresentation as to the true consideration involved in the conveyance of, or contract to convey, any freehold estate in land covered by a recordable contract made under subsection 2 (c) hereof, in the affidavit required by that subsection shall constitute a misdemeanor punishable by a fine not exceeding \$500 or by imprisonment not exceeding six months, or by both such fine and imprisonment.

(b) Should any freehold estate in lands subject to the recordable contract made under subsection 2(c) hereof be conveyed or contracted to be conveyed, after the date of execution of such recordable contract and within five years from the time water becomes available for such lands, at a consideration in excess of the appraised value of said estate, the transaction, and any mortgage or other lien covering any deferred consideration thereunder, shall be invalid and unenforceable by the vendor or grantor, his successors or assigns as to that part of the consideration in excess of the appraised value of the estate involved. In the case of any such transaction involving deferred payments, said invalid portion of the consideration shall be deducted first from the deferred payments in the inverse order of their due dates.

"The vendee or grantee in any such transaction, at any time

within two years from the date of any such conveyance or contract and on filing a correct affidavit as required in subdivision 2 (c) (ii), may recover from the vendor or grantor, or the successors or assigns thereof, an amount equal to the payments made in excess of the appraised value.

"In connection with any judgment or decree hereunder in favor of a vendee or grantee, said vendee or grantee shall have the right to recover court costs and reasonable attorneys' fees.

SEC. 4 (a) For the purposes of assisting in the permanent settlement of farm families, protecting project land, facilitating project development, and preventing speculation in project lands, the Secretary is authorized to administer public lands of the United States in the project area and lands acquired under this section; to sell, exchange, or lease such lands; to establish town sites on such lands; to dedicate portions of such lands for public purposes in keeping with sound project development; to acquire in the name of the United States, at prices satisfactory to him, such lands or interest in lands, within or adjacent to the project area, as he deems appropriate for the protection, development, or improvement of the project; to accept donations of real and personal property for the purposes of this Act; and to disseminate information by appropriate means and methods. Any moneys realized on account of donations for purposes of this Act shall be covered into the Treasury as trust funds.

(b) Contracts, exchanges, and leases made under this section, shall be on terms that, in the Secretary's judgment, are in keeping with sound project development. In addition, land sale contracts shall be on a basis that, in the Secretary's judgment, provides for the return in a reasonable period of years of not less than the appraised value of the land and improvements thereon.

"Qualifications of applicants for the purchase of land for irrigation farming shall be prescribed as provided in subsection C of section 4 of the Act of December 5, 1924 (43 Stat. 702), notwithstanding any other provisions of law.

SEC. 5. (a) The Secretary may enter into agreements to pay annual sums in lieu of taxes to any State or political subdivision thereof with respect to any real property situated therein after it is acquired pursuant to the authority of this Act and before execution by the United States of a contract of sale covering it, out of funds derived from the leasing of such lands. The amount so paid for any year upon any such property shall not exceed the taxes that would be paid to the State or subdivision as the case may be upon such property if it were not exempt from taxation thereby.

(b) Any public lands within the project and any lands or interests in lands acquired by the United States under this Act, beginning at such date or dates and subject to such provisions and limitations as may be fixed or provided by regulations made under section 8, shall be (i) subject to the provisions of the laws of the State of Washington relating to the organization, government, and regulation of irrigation, reclamation, and conservancy districts, and (ii) subject to legal assessment or taxation by any such district, and to liens for such assessments and taxes and to

all proceedings for the enforcement thereof, in the same manner and to the same extent as privately owned lands of like character. The United States does not assume any obligation for amounts so assessed or taxed; and any proceedings to enforce them shall be subject to any title then remaining in the United States, to any prior lien reserved to the United States for unpaid installments under land sale contracts made under this Act, and to any lien for any other charges, accrued or unaccrued, under and by virtue of such contracts or any contract between the United States and the district in which the land is located. Regulations to carry out this subsection shall be effective when filed for record in the manner provided in subsection 2 (f).

(c) In addition to taxation or assessment under subsection 5 (b) upon execution by the United States of a contract of sale of any lands within the project, the lands under contract may be taxed by the State or political subdivision thereof in the same manner and to the same extent as privately owned land of a like character. All taxes legally so assessed may be enforced in the same manner and under the same proceeding whereby said taxes are enforced against privately owned lands, subject to the limitations in favor of the United States that govern the enforcement of district assessments or taxes as provided in subsection 5 (b). If lands under any such contract shall at any time revert to the United States before transfer of title under the contract by reason of default thereunder, all liens or tax titles resulting from taxes levied pursuant to the authority of this subsection upon such lands shall be thereupon extinguished; and the levying of any such tax by such State or political subdivision shall be deemed to be an agreement on its part, in the event of such reversion, to execute and record a formal release of such lien or tax title.

SEC. 6. There are hereby authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, such moneys as may be necessary to carry out the provisions of this Act, to be reimbursable to the extent required by this Act. All revenues received in carrying out the provisions of section 4 hereof shall be covered into the General Treasury as miscellaneous receipts. Amounts equal to appropriated funds requisitioned by the Secretary and made available for disbursement on the books of the Treasurer of the United States shall be debited in a special account in the Treasury, to be known as the Columbia Basin Land Development Account. Amounts equal to revenues covered into the General Treasury as miscellaneous receipts shall be credited in said special account. After such credits equal the amount of the debits with interest thereon at the rate of 3 per centum per annum from the respective dates of the debits, additional credits in said special account shall be made by the Secretary, in the manner determined by him, the basis of corresponding credits to the construction cost obligations of the district or districts entering into contracts under section 2 hereof.

SEC. 7. No water shall be delivered for irrigation within the project until the State of Washington, by appropriate legislation, shall have adopted, authorized, ratified, and consented to all the

provisions of this Act insofar as such provisions or any of them, in whole or in part, may come within the scope of State jurisdiction or authority or be applicable to State lands.

Legislation otherwise conforming to the standards above stated in this section will meet the requirements of the section even though, by reason of limitations in the State constitution, the contracts required under subsection 2 (c) cannot be executed pursuant to such legislation as to the State's school and other public lands. As to such lands, the provisions and requirements of subsection 2 (c) shall remain effective, but if these constitutional limitations have not been removed at least six months prior to the expiration of the time provided for the execution of the contracts the time is hereby extended for a period ending six months after the removal of the limitations.

SEC. 8. The Secretary is authorized to perform such acts, to make such rules and regulations, and to include in the contracts hereinbefore provided for such provisions as he deems proper for carrying out the provisions of this Act; and in connection with sales or exchanges under the Act, he is authorized to effect conveyances without regard to the law governing the patenting of public lands. Wherever in this Act functions, powers, or duties are conferred upon the Secretary, said functions, powers, or duties may be performed, exercised, or discharged by his duly authorized representatives.

SEC. 9. The consent of the United States is hereby given to the sale of school lands and any other public lands of the State of Washington comprising a part of the lands within the project at prices not to exceed their appraised values, determined as provided in subsection 2 (a) hereof.

SEC. 10. If any provision of this Act or the application of such provision to any person or circumstances shall be held invalid, the remainder of the Act and the application of such provision to persons or circumstances other than those as to which it is held invalid shall not be affected thereby.

SEC. 11. This Act may be cited as 'The Columbia Basin Project Act'.

JOINT REPORT ON ALLOCATION AND REPAYMENT OF THE COSTS OF THE COLUMBIA BASIN PROJECT¹

BY THE BUREAU OF RECLAMATION AND BONNEVILLE
POWER ADMINISTRATION

(Approved by the Secretary of the Interior, U.S. Department of the Interior,
on January 31, 1945)

This report deals with the engineering feasibility of the Columbia Basin project, a Federal reclamation project located in the State of Washington. The project includes Grand Coulee Dam, reservoir, power plant, and irrigation works. The report also covers the allocation of the cost of this multipurpose project to the various functions which it serves and the return or repayment of such cost.

LEGISLATIVE BACKGROUND

Construction of a multipurpose project at Grand Coulee on the Columbia River has been the subject of numerous investigations and reports by private, State, and Federal agencies over a long period of years. In 1932 these culminated in a detailed report by the Corps of Engineers, United States Army, and the Bureau of Reclamation, Department of the Interior, which was published as House Document No. 103, volumes 1 and 2, Seventy-third Congress, first session. The following year, construction of the project was begun by the Bureau of Reclamation with money allotted by the Administrator of Public Works, pursuant to the authority of title II of the act of June 16, 1933 (48 Stat. 195, 200). An additional allocation of funds was made pursuant to the act of April 8, 1935 (49 Stat. 115).

The Rivers and Harbors Act of 1935 (49 Stat. 1028, 1039) subsequently specifically authorized construction, operation, and maintenance of the Grand Coulee Dam project by the President through such agents as he might designate. Pursuant thereto the President, on January 29, 1936, designated the Secretary of the Interior, acting through the Bureau of Reclamation, to act as his agent. Subsequent work on the project was financed principally with moneys appropriated from the general fund for the Bureau of Reclamation, those moneys expressly being made reimbursable under reclamation law, although after authorization under the rivers and harbors act an additional allocation of public works

¹ H. Doc. No. 172, 79th Cong., 1st sess.

moneys was made pursuant to the act of June 21, 1938 (52 Stat. 809, 816).

On August 26, 1940, the President issued Executive Order No. 8526, designating the Bonneville Power Administrator as marketing agent for power and energy produced at Grand Coulee Dam in excess of the requirements for the operation of that project, including its irrigation features and providing that the Secretary of the Interior should compute the returns to be made to the Bureau for power and energy to be available thereunder to the Administrator. Pursuant to this order the Administrator has been marketing Coulee power over the Bonneville-Coulee transmission system, constructed with funds appropriated for the Bonneville Power Administration. Pending allocation of costs, rates charged for all power sold by the Administrator have been those approved by the Federal Power Commission for power produced at the Bonneville project.

In 1943 the Columbia Basin Project Act (57 Stat. 14) was enacted. This act recognized the purposes for which the project was authorized by the 1935 act, renamed the project "the Columbia Basin project," reauthorized it as a project subject to the Reclamation Project Act of 1939 (53 Stat. 1187), and provided that the repayment of expenses of construction, operation, and maintenance should be governed by the act of 1935, the Reclamation Project Act of 1939, and the Columbia Basin Project Act. The project is one that was under construction when the 1939 act was passed and in connection with which repayment contracts have not yet been made. Hence, it is within the scope of section 7 (b) of the 1939 act, permitting the making of allocations of cost under section 9 thereof.

PART I. DESCRIPTION OF PROJECT

The Columbia Basin project is a multiple-purpose project having as its purposes control of floods, improvement of navigation, regulation of stream flow, provision for storage and for delivery of stored waters for the reclamation of lands, and other beneficial uses, and the generation of electric energy as a means of financially aiding and assisting in the carrying out of such purposes.

The project comprises the following principal features:

DAM AND POWER PLANT

(1) *Grand Coulee Dam and Columbia River Reservoir* are located at a point on the Columbia River near the head of the Grand Coulee, an ancient channel of the river, 74 miles westerly of Spokane. Now substantially completed, the dam is 4,173 feet long, 550 feet high, and contains 9,926,005 cubic yards of concrete.

The reservoir created by the dam extends 151 miles up the river to the Canadian boundary, and up the Spokane River, a tributary of the Columbia, to within 37 miles of Spokane. The capacity of the reservoir at elevation 1,290 is approximately 10,000,000 acre-feet of water, of which about 5,200,000 acre-feet are usable during

the periods of low-water flow for power generation at the Grand Coulee Dam power plant and at downstream plants, both present and future. Features were incorporated in the construction of the dam so that water may be released for the benefit of downstream power plants.

(2) *The power plant at Grand Coulee Dam.*—The present hydroelectric power installation consists of six permanent generating units, each of 108,000 kilovolt-amperes name-plate rating; two temporary generating units borrowed for the duration of the war from the Shasta power plant of the Central Valley project in California, each of which has a name-plate rating of 75,000 kilovolt-amperes; and two permanent station-service generating units, each rated at 12,500 kilovolt-amperes. This equipment, having an aggregate name-plate rating of 823,000 kilovolt-amperes, is installed in the left powerhouse adjacent to the left end of the dam.

The ultimate power installation will consist of 18 main generating units, each rated at 108,000 kilovolt-amperes, and 3 station-service units of 12,500 kilovolt-amperes each. Nine of the main units will be installed in the right powerhouse adjacent to the right end of the dam. Due to the fact that the generating units have a continuous capacity of 120,000 kilowatts, and the load factor is expected to be much higher than originally anticipated, only 15 units are required to generate the potential energy in the stream modified by present storage, and the cost estimates used herein are based on an installation of 15 units.

The power plant is presently connected through suitable transformation and switching equipment to the high-voltage power network of the Bonneville Power Administration.

IRRIGATION SYSTEM

(1) *The primary pumping plant.*—This is the pumping plant at Grand Coulee Dam. The anticipated installation is 10 motor-driven pumps, each of 1,600 cubic feet per second capacity, with space for 2 additional pumps if these are found to be needed.

(2) *Feeder canal.*—This canal will extend from the upper end of the pump discharge conduits to the Grand Coulee equalizing reservoir.

(3) *Grand Coulee equalizing reservoir.*—This reservoir will be created by construction of dams at each end of the Grand Coulee and will have an active capacity of 700,000 acre-feet below elevation 1,570.

(4) *Main canal.*—The main canal will take water out of Grand Coulee equalizing reservoir near Coulee City, Wash. It will consist of the necessary canals, siphons, tunnels, and related works to regulate and carry the water from the equalizing reservoir to Long Lake, a lake that will be formed by the construction of Long Lake Dam, and a canal from Long Lake to the bifurcation works for the east low and west canals. The works are designed so that a drop power plant can ultimately be installed at the head of Long Lake, but the cost estimates appearing in this report do not cover

such a plant. About 6,400 acres will be served directly from the main canal.

(5) *East high canal*.—This canal will divert water from the forebay site of the Long Lake power plant and will serve the higher east-side lands north of Washtucna Coulee, comprising about 215,000 acres.

(6) *East low canal*.—This canal will serve the lower east-side lands, including the area adjacent to the Snake River, east of Pasco, comprising about 252,000 acres.

(7) *West canal*.—This canal will serve the west-side lands, comprising about 281,000 acres.

(8) *Potholes Reservoir*.—This reservoir will have an active capacity of about 350,000 acre-feet. It will serve about 267,600 acres of lands lying to the south thereof. The water will be distributed thereto through—

(a) The Potholes east canal, which will serve about 254,000 acres.

(b) The Potholes west canal, which will serve about 13,600 acres.

(9) *A secondary pumping plant* on the Columbia River northwest of Pasco. This pumping plant will serve about 6,000 acres until such time as the lands can be served by a gravity canal from the Potholes Reservoir.

(10) *One or more secondary pumping plants* on the south side of the Snake River, which will serve an area of about 7,000 acres, or such lesser area as may be available above the backwater of the proposed Umatilla Dam, such area being known as the Burbank division.

(11) *A secondary pumping plant* in the Lower Grand Coulee to recapture seepage and return flow.

(12) *Motor-driven secondary pumping plants* at suitable places along the canals to repump water to lands adjacent to, but higher than, the canals. The area to be served by such supplemental pumping is estimated to comprise 262,000 acres, this area being included, however, in the acreages above stated in connection with the canals.

(13) *Laterals and sublaterals* sufficient to provide for delivery of water to each farm unit.

(14) *A drainage system* to carry off waste and seepage of water resulting from the irrigation of project lands. This system will be built as the need therefor develops.

(15) *Telephone and power lines, buildings, and all facilities and structures and lands and interests in lands* required in the construction, operation, and maintenance of the irrigation features of the project.

The works comprising the project as above described may have to be modified, added to, or parts thereof omitted as the necessity for such changes develops in the course of construction. Such changes as may be found to be necessary are expected, however, to be within the framework above described. They would not be of such character as to result in any substantial increase in the area

of lands to be served, nor otherwise to result in a substantial change in the ultimate objectives of the project.

The irrigation features of the project have been planned so as to provide a water supply for the irrigation of a total of approximately 1,029,000 acres of irrigable lands lying in central Washington. These lands lie in part in each of the counties of Grant, Adams, Franklin, and Walla Walla. The lands comprise those arable lands, within the boundaries of the three existing Columbia Basin irrigation districts, which it has been determined tentatively may be supplied with water from the project works, and which are required to be included in the project in order to provide for its sound development and operation, being therefore "lands within the project" as that phrase is defined in the Columbia Basin Project Act.

There is attached a map showing the location and principal features of the project, particularly its irrigation features, and the general location of the area to be irrigated.

The over-all plan of the project and its individual principal features have been the subject of painstaking and thorough engineering investigation and planning over a period of several years by both the Corps of Engineers and the Bureau of Reclamation. The engineering feasibility of the key features of the entire plan, the Grand Coulee Dam and power plant, is already demonstrated. The principal features of the irrigation plan remain to be built. Based on the thorough investigations that have been made and the careful planning and design that have gone into study of these features to date, engineers of the Bureau of Reclamation have concluded that the engineering feasibility of their construction and operation is beyond question.

Estimated Costs of Project

The present and estimated final costs of the Columbia Basin project are as follows:

Actual cost to June 30, 1944.....	¹ \$175,005,533
Estimated final cost.....	487,030,228

¹ Not including the cost of the Shasta units and other miscellaneous undistributed amounts totaling together \$5,807,656. Of this, \$3,810,810 represents the cost of 2 Shasta units temporarily charged to the Columbia Basin project. It also includes a donation by the State of Washington of \$49,528 and an adjustment of work relief clearing costs of \$1,947,318.

The actual and estimated final costs are divided among project features approximately as follows:

	Costs to June 30, 1944	Estimated final costs ¹
Dam and reservoir.....	\$122,138,945	\$126,354,000
Power plant and facilities.....	45,072,283	79,894,048
Irrigation works.....	7,794,305	280,782,180
Total.....	175,005,533	487,030,228

¹ Estimated average prices January 1940.

PART II. ALLOCATIONS OF COST

Part II of this report is directed to the allocation of project construction costs among various purposes. The analysis proceeds as follows. First, with a consideration of the need for and purposes to be served by making the allocation and the statutory requirements relating thereto; second, with a consideration of what costs are directly assignable and what are costs of multiple-use features requiring allocation; third, the basis for the allocation of multiple-purpose costs; and finally, the recommended allocation of all project costs.

* * * * *

The proposed final allocation of cost is as follows:

Table 9

Function served	Joint costs		Direct costs		Total
	Dam and reservoir	Per cent	Power plant	Irrigation works	
Irrigation (including pumping power)	\$55,155,760	43.65	\$5,992,054	\$280,782,180	\$341,929,994
Present commercial power	139,925,249	31.60	73,901,994		113,827,243
River regulation	30,272,991	23.96			30,272,991
Flood control and navigation (non-reimbursable).	1,000,000	.79			1,000,000
National defense					
Unemployment relief					
Recreation					
Total	126,354,000	100.00	79,894,048	280,782,180	487,030,228

¹ Includes \$4,826,129 allocated to river regulation at the Bonneville project for power production.

PART III. FINDING OF FEASIBILITY

The Reclamation Project Act of 1939 requires a finding of engineering and financial feasibility as to projects that are initiated under that act. It provides also for the making of cost allocations in accordance with the provisions of that act in the case of projects, such as the Columbia Basin project, which were initiated under other acts, and these features of the 1939 act are pertinent to this project by reason of the Columbia Basin Project Act which requires that the repayment of project costs be made in accordance with the 1939 act, among others. The pertinent portion of the 1939 act, subsection 9 (a), is as follows:

No expenditures for the construction of any new project, new division of a project, or new supplemental works on a project shall be made, nor shall estimates be submitted therefor, by the Secretary until after he has made an investigation thereof and has submitted to the President and to the Congress his report and findings on—

- (1) the engineering feasibility of the proposed construction;
- (2) the estimated cost of the proposed construction;

(3) the part of the estimated cost which can properly be allocated to irrigation and probably be repaid by the water users;

(4) the part of the estimated cost which can properly be allocated to power and probably be returned to the United States in net power revenues;

(5) the part of the estimated cost which can properly be allocated to municipal water supply or other miscellaneous purposes and probably be returned to the United States.

If the proposed construction is found by the Secretary to have engineering feasibility and if the repayable and returnable allocations to irrigation, power, and municipal water supply or other miscellaneous purposes found by the Secretary to be proper, together with any allocation to flood control or navigation made under subsection (b) of this section, equal the total estimated cost of construction as determined by the Secretary, then the new project, new division of a project, or supplemental works on a project, covered by his findings, shall be deemed authorized and may be undertaken by the Secretary. If all such allocations do not equal said total estimated cost, then said new project, new division, or new supplemental works may be undertaken by the Secretary only after provision therefor has been made by Act of Congress after the Secretary has submitted to the President and the Congress the report and findings involved.

Subsection 9 (b) provides for the allocation to flood control or navigation of such part of the estimated total cost of a project as the Secretary of the Interior may find proper, after consultation with the Chief of Engineers and the Secretary of War.

In accordance with the discussion in parts I and II, above, the project is found to have engineering feasibility; the estimated cost of proposed construction is \$487,030,228; and the part of the estimated cost properly allocable to each of the purposes to be served, without regard to the probability of repayment or return is found to be as follows:

Irrigation	\$341,929,994
Power	113,827,243
River regulation	30,272,991
Flood control and navigation	1,000,000

There remains for determination what amounts are probably repayable or returnable from water users, power revenues, and miscellaneous purposes, and whether such amounts, together with the nonreimbursable allocation to flood control and navigation, equal the total estimated cost of construction, plus, of course, operating expenses and the costs of necessary replacements over the amortization period.

* * * * *

Detailed arrangements to carry out the purposes of this report will be covered by a memorandum of understanding between the Bonneville Power Administration and the Bureau of Reclamation, to be approved by the Secretary.

(Signed) H. W. BASHORE,
Commissioner of Reclamation.

(Signed) PAUL J. RAYER,
Bonneville Power Administrator.

The foregoing report and all the allocations, determinations, and findings set forth therein are hereby approved and adopted.

(Signed) HAROLD L. ICKES,

Secretary of the Interior.

January 31, 1945.

DEPARTMENT OF THE INTERIOR,
Washington, D. C., March 27, 1945.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: There is transmitted herewith, pursuant to the Reclamation Project Act of 1939, a report on the Columbia Basin project on the Columbia River dated October 30, 1944, prepared by the Bureau of Reclamation and the Bonneville Power Administration. It was approved and adopted by me on January 31, 1945.

The report concerns the engineering feasibility of the project, the proper allocation of the estimated construction costs attributable to each of the several purposes of the project, and the part of the Government's investment that is to be returned from various revenue-yielding sources. The allocation of costs to the various project purposes bears directly on the establishment of rates for the sale of power to be produced at the Grand Coulee Dam power plant and the amount that the prospective irrigation farmers must pay for water for irrigation purposes.

The project comprises as its principal features the Grand Coulee Dam and Reservoir, the Grand Coulee Dam power plant, and the irrigation system. The dam was completed in 1941. The power plant, with a capacity rated at 823,000 kilo-volt-amperes and an ultimate capacity rated at 1,969,000 kilovolt-amperes, is now in operation. The engineering feasibility of the dam and power plant is a demonstrated fact. The importance of their contribution to the winning of the war is a matter of record. The principal features of the irrigation system remain to be constructed. The system will serve a net irrigable area of 1,029,000 acres. The report indicates that the engineering feasibility of this system is beyond question.

The project (earlier designated as the Grand Coulee Dam project) was initiated as a public works undertaking by an allocation of funds pursuant to title II of the act of June 16, 1933 (48 Stat. 195, 200). The project was later specifically authorized by the Rivers and Harbors Act of 1935 (49 Stat. 1029, 1039). Pursuant to the authority of that act, you designated the Secretary of the Interior, acting through the Bureau of Reclamation, as your agent to continue the construction and to operate and maintain the project. More recently, the project was reauthorized by

the Columbia Basin Project Act (57 Stat. 14) and was thereby specifically recognized as being governed by the Reclamation Project Act of 1939 (53 Stat. 1187). The latter act controls the establishment of power rates and the terms for the repayment by the irrigation farmers of the amount of the construction cost allocated to be repaid by them.

In aid of the provisions concerning power rates and the water users' obligation, section 9 of the Reclamation Project Act of 1939 provides that the Secretary of the Interior shall make findings on, among other things—

the part of the estimated cost which can properly be allocated to irrigation and probably be repaid by the water users; the part of the estimated cost which can properly be allocated to power and probably be returned to the United States in net power revenues; the part of the estimated cost which can properly be allocated to municipal water supply and other miscellaneous purposes and probably be returned to the United States.

Section 9 provides also that the Secretary of the Interior, after consultation with the Chief of Engineers and the Secretary of War, may make nonreimbursable allocations to flood control and navigation.

The actual expenditures toward the construction of the project through June 30, 1944, were \$175,005,533. The estimated cost of the completed project, figured at the estimated average prices as of January 1940, is \$487,030,228.

A most thorough analysis of several possible bases for the allocation of costs to the various purposes to be served by the project was made. The allocation I have approved and adopted is as follows:

To irrigation	\$341,929,994
To commercial power	113,827,243
To downstream river regulation	30,272,991
To flood control and navigation	1,000,000

All costs which could be associated with only one purpose were treated as the direct costs assignable to that purpose. The expenditures made and to be made in connection with features of the project serving multiple purposes were allocated among the several purposes to be served thereby on the basis of an analysis as to the alternative justifiable expenditure. A full discussion of the analysis and references to all requisite basic data appear in the report.

The Federal reclamation laws require that all expenditures in the construction of the project, except those allocated to flood control and navigation, must be returned to the United States. It has been determined tentatively that the irrigation water users will be able to pay directly approximately \$87,465,000. It is expected that they will, in addition, pay \$50,500,000 through the use of power for irrigation pumping during the repayment period. They will also pay all the operating expenses of the irrigation system. Commercial power is the only other dependable source of

return. Therefore, in order to meet the requirement of reimbursability, power must bear construction costs totaling \$348,065,228. Power revenues will be required also to meet during the repayment period all operating expenses of the dam and reservoir and the power plant and to provide necessary replacements.

Careful estimates have been made of the revenues that may be expected during the repayment period from the sale of commercial power at present rates through the Bonneville Power Administration. It is estimated that these will be more than sufficient to return all the costs herein enumerated as returnable by power, in addition to meeting all estimated obligations chargeable to the sale of Grand Coulee power in connection with the Bonneville project and the Bonneville-Coulee transmission system. Accordingly, I have found that all the estimated reimbursable construction costs of the project which are allocated to power, to downstream river regulation and to irrigation (less the portion to be repaid by the water users), can probably be returned to the United States in net power revenues; and that the returnable and repayable allocations, together with the allocation to flood control and navigation, equal the total estimated project cost.

A situation with respect to requirements of law as to return of the cost and as to minimum commercial power rates needs to be noted. The Reclamation Project Act of 1939 provides the rate formula. The Bureau of Reclamation has heretofore taken the position that this act requires the return from power revenues of operation and maintenance costs, and of the project construction costs properly allocated to power plus the reimbursable construction costs allocated to other purposes but which have been assigned to be returned from power revenues, and, in addition, interest at 3 percent per annum on the construction costs properly allocated to power. Rates under that act have been established heretofore consistently in conformity with this position, and the Congress has been informed at various times concerning the practice. In connection with the attached report, however, the requirements of the law were fully considered and the conclusion reached that this position was more stringent than the law requires. In an opinion which I approved September 29, 1944 (M-33473), my Solicitor concluded that minimum rates for power need be—

such as to produce revenues sufficient only to meet in addition to the return for operation and maintenance cost, an amount equal to 3 percent of the power construction costs with the proviso that if total revenues thus produced are insufficient to repay all costs allocated to power to be repaid by power revenues, "other fixed charges" must be included in the rate schedule to produce revenues sufficient to repay such costs.

It is estimated that the present effective rates of the Bonneville Power Administration would produce revenues more than sufficient to meet all the costs allocated to power, plus interest on them amounting to \$70,786,815 and also \$244,000,000 of costs for irrigation works. The \$244,000,000 contribution by power to irrigation amounted to 155 percent of the total power allocation. In other words, the present effective rates of the Bonneville Power

Administration will produce, in addition to returns adequate to meet the rate requirements of the act, an amount of \$70,786,815, which it is proposed to use for the purposes described below. Under the earlier procedure described in the preceding paragraph this amount would not have been so distributed.

While not required by law, it is planned for the present to maintain the Bonneville power rates at a level sufficient, if maintained over the entire repayment period, to return the costs and this sum of \$70,786,815. Since this amount would be in excess of the required return, it is proposed that it be earmarked to be available for these purposes:

(1) A reduction, if and when circumstances warrant and within stated limits, of the total obligation for construction charges which the water users are required to assume under the Columbia Basin Project Act.

(2) A reduction in power rates in an amount equal to the total sum available for reduction in the water users' obligation.

(3) To be taken into account in determining the financial feasibility of various irrigation and power projects that may be undertaken in the Columbia River Basin.

The accomplishment of the third purpose may require additional legislation. To give ample time for consideration to such legislation, it is proposed to continue the accumulations of surplus funds for this purpose until December 31, 1960.

Section 9 of the Reclamation Project Act of 1939 authorizes the concurrent submission of this report to you and to the Congress. I have thought it desirable to present the matter to you first. I expect, however, to present it and a copy of this letter to the Congress promptly, unless you have objections.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE,
Washington D. C., April 21, 1945.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: I have no objections to the transmittal to the Congress at this time of the joint report on the Columbia Basin project, submitted to me with your letter of March 27. I understand that this report has a special significance, in that it is the first of several that will be required in connection with the development of the river basins of the Western States.

The allocations of costs and the proposed distribution of revenues will seemingly protect the interests of the United States and meet the requirements of law governing the return of project reimbursable expenditures. There are certain omissions and pro-

posals in the report, however, which I am advised should be overcome or supported by legislation. The more important of these are:

(a) The failure to allocate part of the costs to fish, wildlife, and recreation benefits;

(b) The proposal to secure return of benefits from future downstream plant construction and operation;

(c) The proposal to set aside a portion of the revenues in a special account in the Treasury; and

(d) The proposal to utilize the earmarked fund for certain specific purposes.

Because of the precedent importance of these matters, I suggest that you prepare them in legislative form for early presentation through regular channels for the consideration of the Congress.

I would also suggest that you include with your transmittal of the present report to Congress a copy of my letter to you of this date.

Sincerely yours,

(Signed) HARRY S. TRUMAN,
President.

DEPARTMENT OF THE INTERIOR,
Washington, D. C., May 8, 1945.

Hon. SAM RAYBURN,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: Pursuant to the Reclamation Project Act of 1939, there is transmitted herewith a report, dated October 30, 1944, on the Columbia Basin project on the Columbia River.

This report, which was prepared by the Bureau of Reclamation and the Bonneville Power Administration, was approved by me on January 31, 1945. I transmitted it to President Roosevelt on March 27. A copy of my letter to President Roosevelt is enclosed. On April 21, President Truman informed me that he had no objections to my transmitting the joint report to the Congress at this time. A copy of the President's letter of April 21 is enclosed.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

ADDITIONAL GENERATING UNITS

UNITED STATES DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D. C., December 29, 1948.

Memorandum.

To: SECRETARY J. A. KRUG.

From: Commissioner.

Subject: Report on finding of feasibility, units R-7, R-8, and R-9 — Grand Coulee powerplant — Columbia Basin Project, Washington.

Transmitted herewith are a report and findings, under the authority of section 9 of the Reclamation Project Act of 1939 (53 Stat. 1187), with respect to the proposed installation of three additional 108,000-kva generating units as supplemental works of the Grand Coulee powerplant, Columbia Basin Project.

Authorization of the Columbia Basin Project by various acts of Congress and the original allocation report (H. Doc. No. 172, 79th Cong., 1st sess.) were predicated on the installation of fifteen main generating units and three station service generating units at the Grand Coulee powerplant. Penstocks and powerhouse space have been provided, however, for 18 main units to enable use of future upstream storage above the Franklin D. Roosevelt Reservoir created by the Grand Coulee Dam.

With a system consisting of Hungry Horse, Grand Coulee, McNary, Bonneville, and Detroit dams, all of which are existing or under construction, the increase in nominal prime power at Grand Coulee, with the three additional units and with the benefit of Hungry Horse storage, amounts to 160,000 average kilowatts. This increase in prime power is equivalent to 204,400 kilowatts of salable firm power at 75 per cent load factor, after reflecting losses of 7 per cent and a diversity factor of 1.03. In order to generate such additional firm power, the three additional units are necessary because of the load factor at which the power has to be delivered.

The report shows that all costs of installing, operating, and maintaining the additional units and related facilities at Grand Coulee Dam can be met from the revenues from increased production of power and that, in addition, a substantial surplus of revenues will be available and adequate to cover reasonable payments to the Hungry Horse Project on account of downstream benefits. For the purposes of this report, all of these costs have been as-

sumed to be properly chargeable to commercial power production.

Incremental revenues to be derived during a repayment period of 50 years, which has been adopted for the purposes of this report, by virtue of the installation of the three additional generating units and the use of Hungry Horse storage, are estimated at \$86,450,000, an amount substantially greater than the revenue requirements of subsection 9(c) of the Reclamation Project Act of 1939. Total costs required to be returned pursuant to subsection 9(a) of said Act over the same period for construction, interim replacements, operation, and maintenance are estimated to be \$32,053,000. The excess of the revenues over these costs is \$54,397,000. This balance is substantially in excess of the amount that would be required to return interest of \$15,423,000 for the period, computed at the rate of three per cent per annum on the unamortized balances of the construction costs of the three units, and estimated reasonable payments to the Hungry Horse Project on account of downstream benefits.

From the report, as summarized above, I find that, within the meaning of section 9 of the Reclamation Project Act of 1939, the proposed supplemental works are feasible as a matter of engineering; that the estimated costs are, for the purposes of this report, properly chargeable to commercial power production; and that these costs will probably be returned to the United States from the additional power revenues that will result from increased power production. I find further that these works, being for the purposes of this report treated as allocable to commercial power production, are not works for irrigation and purposes incidental thereto within the meaning of subsection 1 (c) of the act of December 22, 1944 (58 Stat. 887). It follows that on your approval of this report and submission of it to the President and to the Congress, the works may be regarded as authorized under the provisions of section 9 of the Reclamation Project Act of 1939.

Problems with respect to the handling and disposition of the revenues attributable to these works are present. These will be dealt with by arrangements to be made between the Bureau of Reclamation and the Bonneville Power Administration, subject to your approval.

I recommend that you approve and adopt this report and the findings herein made and that you submit them, together with this letter, to the President and the Congress.

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved and adopted January 5, 1949,

(Signed) J. A. KRUG,
Secretary of the Interior.

UNITED STATES DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, January 5, 1949.

THE PRESIDENT,
The White House.
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: There is enclosed a copy of a memorandum to me from the Commissioner of Reclamation and the Commissioner's accompanying report on feasibility of additional generating capacity at Grand Coulee Dam, Columbia Basin Project, Washington, prepared pursuant to the provisions of Section 9 of the Reclamation Project Act of 1939. I have approved and adopted the report and the accompanying findings set forth in the Commissioner's memorandum. Consequently, the installation of the additional generating capacity at Grand Coulee Dam dealt with in the report and findings (generating Units R-7, R-8, and R-9) is authorized under the provisions of Section 9 (a) of the Reclamation Project Act of 1939.

Unless you have objection, the Commissioner's memorandum and report will be transmitted to the Congress in accordance with the provisions of the Reclamation Project Act of 1939.

Sincerely yours,

(Signed) J. A. KRUG,
Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington 25, D. C., January 17, 1949.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: In response to your letter dated January 5, 1949, transmitting your report on feasibility of additional generating capacity (Units R-7, R-8 and R-9) at Grand Coulee Dam, Columbia Basin Project, Washington, I am authorized by the Director of the Bureau of the Budget to advise you that there would be no objection to the submission of the report to Congress.

Sincerely yours,

(Signed) L. C. MARTIN,
Assistant Director, Estimates.

OFFICE OF THE SECRETARY,
Washington 25, D. C., February 8, 1949.

Honorable SAM RAYBURN,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: Pursuant to the Reclamation Project Act of 1939 there are transmitted herewith a report and findings on the feasibility of the installation of additional generating capacity (Units R-7, R-8 and R-9, at Grand Coulee Dam, Columbia Basin Project, Washington.

On January 5 the report and findings were transmitted to the President. The Bureau of the Budget, by letter dated January 17, has advised that there would be no objection to the submission of the report to the Congress.

With the transmittal of the report and findings to the Congress the requirements of Section 9 (a) of the Reclamation Project Act of 1939 have been fulfilled with the consequence that installation of these additional generating units at Grand Coulee Dam is authorized as new supplemental works on the Columbia Basin Federal reclamation project, Washington.

In addition to the report and findings, there are also enclosed a copy of this Department's letter of January 5 to the President and a copy of the letter from the Bureau of the Budget dated January 17.

Sincerely yours,

(Signed) J. A. KRUG,
Secretary of the Interior.

Identical letter sent to President of the Senate.

SPILLWAY LIGHTING AND SOAP LAKE PROTECTION

[Extract from] An act making appropriations for the Tennessee Valley Authority, certain agencies of the Department of the Interior, and civil functions administered by the Department of the Army, for the fiscal year ending June 30, 1957, and for other purposes. (Act of July 2, 1956, 70 Stat. 474, 476, Public Law 641, 84th Cong., 2d sess.)

* * * * *

Construction and Rehabilitation: * * * *Provided further,* That not to exceed \$200,000 of this appropriation shall be available for lighting the spillway of Grand Coulee Dam and shall be nonreimbursable and nonreturnable: *Provided further,* That not to exceed

\$233,800 shall be available for the emergency protection of medicinal water of Soap Lake, Washington, from irrigation operations of the Columbia Basin project, which amount beyond the ability of the water users to repay shall be repayable from surplus power revenues of Grand Coulee Dam: * * *

PALOUSE PROJECT ²

UNITED STATES GEOLOGICAL SURVEY,
RECLAMATION SERVICE,
November 5, 1904.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: Investigations have been carried on by the Reclamation Service during the past year looking to the development of an irrigation project in the southeastern part of the State of Washington. This project contemplates the construction of a small storage reservoir at Rock Lake on the drainage of the Palouse River, and the diversion of the Palouse River into a reservoir site located on adjacent drainage, known as the Washtucna reservoir.

The project contemplates the irrigation by gravity of about 80,000 acres of land just above the junction of the Snake and Columbia rivers. In its ultimate development it will also serve about 20,000 acres more by pumping.

Investigations of this project have proceeded to a point where the general plan and estimates have been considered by a board of consulting engineers who have reported to this office, under date of October 23. They pronounce the project feasible and advise its early construction. They also recommend that negotiations be taken up at once to quiet the adverse claims for water rights, power rights or required rights of way, also that more complete surface borings for foundations and other investigations be pushed with the object of early construction. The recommendations of the board of engineers are approved by this office.

The above-mentioned Washtucna reservoir site is traversed by a spur of the Oregon Short Line railroad, and its utilization requires the removal of this railway, which is the most important matter for negotiation to be taken up. Minor matters are those incident to most reclamation projects, such as right of way for canals and reservoirs on private land, claims of water rights, etc.

² The *Palouse Project* was found feasible under the original Reclamation Act prior to its amendments, but later reclassified as a secondary project. The area is now included in the Columbia Basin project.

It is estimated that the cost of this project will be about \$35 per acre upon the land to be irrigated including the necessary rights of way, damages, etc. This is little, if any, more than one-half of the value of the land with water rights and the project is considered an attractive one from a financial point of view.

I have to recommend that this project receive your preliminary approval and that authority be granted this office to push investigations to completion and to negotiate for the necessary rights and privileges, and to place the results of such negotiations before the Department for your approval.

Very respectfully,

(Signed) CHAS. D. WALCOTT,
Director.

DEPARTMENT OF THE INTERIOR,
Washington, November 14, 1904.

THE DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: In a letter of the 5th instant to the Department, you reported the results of recent investigations by the Reclamation Service, looking to the development of an irrigation project in the southeastern portion of the State of Washington.

It appears that this, the Palouse Project, contemplates the construction of a storage reservoir at Rock Lake, on the drainage of the Palouse River, and the diversion of the waters of that river into a reservoir site, located on adjacent drainage, known as the Washtucna reservoir, and that about 80,000 acres of land above the junction of the Snake and Columbia rivers will thereby become subject to irrigation by gravity; and that a further area of 20,000 acres may be ultimately irrigated by pumping.

You have stated that a board of consulting engineers has pronounced the project feasible and has advised its early construction, the estimated cost of the project being about \$35 per acre, including all outlay, which cost you have stated is little more, if any, than one-half of the value of the land with water rights.

In view of the foregoing and of other facts and considerations brought to my attention, you have recommended that the project receive preliminary approval, and that authority be given your office to push investigations to completion, and to negotiate for the necessary rights and privileges, and to place the results of such negotiations before the Department for approval.

I have considered your presentation of this matter and I hereby approve your recommendation as made, and hereby authorize you to proceed with the investigations and negotiations as set forth in your letter.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

CRESCENT LAKE DAM PROJECT

OREGON

Funds were provided, without a finding of feasibility, for emergency rehabilitation of Crescent Lake Dam Project by the Interior Department Appropriation Act, 1955 (Act of July 1, 1954, 68 Stat. 331, Public Law 465, 83d Cong., 2d sess.)

PROVISIONS OF INTERIOR DEPARTMENT APPROPRIATION ACT, 1955

[Extract from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1955, and for other purposes. (Act of July 1, 1954, 68 Stat. 361, 365, Public Law 465, 83d Cong., 2d sess.)

* * * * *

Construction and rehabilitation: For construction and rehabilitation of authorized reclamation projects or parts thereof (including power transmission facilities) and for other related activities, as authorized by law, including payments under the Act of August 15, 1953 (67 Stat. 592), to remain available until expended, * * * *Provided further,* That not to exceed \$297,000 shall be available toward the emergency rehabilitation of the Crescent Lake Dam project, Oregon, to be repaid in full under conditions satisfactory to the Secretary of the Interior: * * *

CROOKED RIVER PROJECT

OREGON

The Crooked River Project was authorized by Act of Congress on August 6, 1956. (70 Stat. 1058-9, Public Law 992, 84th Cong., 2d sess.)

UNITED STATES DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D. C., March 11, 1955.

The SECRETARY OF THE INTERIOR.

SIR: This is my proposed report on the potential Crooked River Project, Oregon. It includes the accompanying February 12, 1953, report of the Regional Director, Boise, Idaho.

The physical plan presented in the Regional Director's report remains essentially unchanged. New information on costs, allocation of costs, and on repayment has been developed since completion of the Regional Director's report and is presented in an attachment to this letter.

The Crooked River Project surrounds and is adjacent to the town of Prineville in Crook County of central Oregon. It would utilize the water resources of Ochoco Creek and the Crooked River, a tributary of the Deschutes River. A stable irrigation water supply would be provided for 9,990 acres of dry land and 10,220 acres of land now inadequately irrigated. These areas include 7,230 new acres and 7,660 presently inadequately irrigated acres within the Ochoco Irrigation District and 5,320 acres of non-district land of which 2,760 would be classed as dry land and 2,560 as inadequately irrigated. In addition, 51,200 acre-feet of water annually would be available for future use on other acreage in the Deschutes River Basin. Flood control, drainage, recreation, and fish and wildlife benefits also would result from construction of the project works. Preservation and propagation of fish and wildlife are included among project purposes.

Normal annual precipitation for the project area is a little over 9 inches, about half of which falls from April through October. This semi-arid condition restricts the agricultural use of land without irrigation. Since agriculture is one of the two main industries

of the area it is most important that it be strengthened and expanded to assure an adequate economy especially if the other industry, lumbering, remains static or declines. Also, the project would afford a number of part-time farming opportunities for workers employed in local industries.

Frequently, as a result of rapid melting of snow, agricultural bottom lands and part of Prineville and its surrounding area are flooded and sometimes damaged seriously. The recently rehabilitated Ochoco Reservoir and the proposed Prineville Reservoir when operated in conjunction with each other would develop the available water resources for irrigation and would provide significant control of the flood waters of Ochoco Creek and the Crooked River. Proposed drainage would greatly improve agricultural bottom lands.

The local people, recognizing these problems, have shown a great deal of interest in securing additional irrigation water and protection from spring floods, and are favorable to a Federal project. Construction of the project is economically justified in that the evaluated annual benefits exceed the estimated annual costs by the ratio of better than 2 to 1 based on a 50-year period of analysis. This benefit-cost ratio is based on the use of all water made available by the project. Considering direct benefits only, the ratio would be 1.25 to 1.

New principal project works being recommended for construction would consist of the Prineville Dam and Reservoir of 155,000 acre-feet capacity on Crooked River about 20 miles upstream from Prineville; a small diversion dam four miles above Prineville; a diversion canal of 6.3 miles length; the Barnes Butte Pumping Plant; a distribution canal; the Ochoco Relift Pumping Plant; and necessary drainage works. The project would utilize 46,500 acre-feet of usable capacity at the recently rehabilitated Ochoco Dam and Reservoir and the existing distribution works of the Ochoco Irrigation District, which works would require some minor improvements. Energy for project pumping would be obtained from the Pacific Power and Light Company, under a contractual agreement entered into with the company on November 21, 1939, which provided for the installation, by the Federal Government, of a generator in the Company's Cove Power Plant on the Crooked River. This generator was installed in conjunction with the construction of the Deschutes Reclamation Project with the understanding that the energy would be made available for future irrigation pumping.

The estimated cost, based on October 1954 prices, of the new facilities that would actually be constructed is \$6,339,000. This amount includes \$200,000 which represents costs of investigations up to the estimated date of initial construction and \$570,000 for drainage costs which reflect an increase of \$312,000 over the amount shown in the Regional Director's report. The new and additional annual operation, maintenance and replacement costs which would be necessary as a result of the new works are estimated at about \$38,800.

An amount of \$259,000, in lieu of \$60,000 shown in the Regional

Director's report, represents the unpaid portion of the cost of the federally installed generating unit in the Cove Power Plant assigned to the Crooked River Project. The increase is the result of assigning to the Crooked River Project the estimated total unpaid cost of the Federal power installation at the time the Crooked River Project begins to use Cove power in place of a division of costs between the North Unit of the Deschutes Project and the Crooked River Project as contemplated in the Regional Director's report. The \$259,000 must be added to the aforementioned \$6,339,000, new facilities cost to arrive at \$6,598,000, the amount to be allocated for repayment purposes.

Tentative allocations of the \$6,598,000 based upon the Separable Costs-Remaining Benefits methods, are as follows: reimbursable-irrigation \$5,903,000; nonreimbursable-flood control \$653,000. Specific costs, which would also be considered nonreimbursable, allocated to fish and wildlife and recreation are respectively \$29,000 and \$13,000. The latter amount is the cost of minimum recreation facilities at Prineville Reservoir which I recommend be constructed by the Federal Government on a nonreimbursable basis provided that a responsible State or local agency agrees to operate and maintain the completed facilities.

The irrigation amount is sub-allocated as \$4,049,000 to the 20,210 acres of project lands and \$1,854,000 to deferred acreage which would be irrigated in the future using the 51,200 acre-feet of water excess to the needs of the potential Crooked River Project. The \$4,049,000 allocated to irrigation of project lands is further allocated to the Ochoco Irrigation District lands and non-district lands in the respective amounts of \$3,534,000 and \$515,000. All sub-allocations are also based on the Separable Costs-Remaining Benefits method of allocation.

Two outstanding debts—(1) the unpaid balance of a Reconstruction Finance Corporation loan and (2) the amount owed to the United States for the cost of rehabilitating Ochoco Dam—will affect the ability of the Ochoco Irrigation District to repay the reimbursable project costs allocated to that District. It is proposed that these existing debts be incorporated with Crooked River Project costs for repayment. At the start of the repayment period for the project, it is estimated the unpaid balance on the RFC bonds will be \$117,500. An existing contract provides that the Ochoco Dam costs of \$500,000 will be repaid in a 40-year period following repayment of the bonds.

The annual amortization capacity of the Ochoco Irrigation District lands is approximately \$39,600. This is the net amount available for repayment purposes after deducting the annual operation, maintenance and replacement costs of \$45,600, which includes about \$19,100 for existing works, from the annual payment capacity. In 50 years the water users could return \$1,980,000. This would repay the cost of the bonds, cost of Ochoco Dam rehabilitation, and \$1,363,000 toward the cost of new works and the Cove Power Plant installation. This would leave unpaid a balance of \$2,171,000 of the costs allocated to the Ochoco Irrigation District lands.

The annual repayment ability or amortization capacity of non-district lands is estimated to be about \$15,500 which is more than adequate to repay the \$515,000 allocated to these lands in 50 years.

Investigations to date indicate that the potential uses of water in the Deschutes River Basin far exceed available supply. The excess water of the Crooked River Project could be used in several localities within the basin and full development of the Prineville Reservoir site is considered fully justified.

For purposes of demonstrating repayment it was assumed that the excess water would be utilized by lands of the North Unit of the Deschutes Project. A pumping plant at the point on the Crooked River where the North Unit Main Canal crosses, via a flume, would be necessary to furnish Crooked River water to the canal for delivery to the North Unit lands. Such pumping plant would not actually be constructed as part of the Crooked River Project but its estimated cost of \$777,000 is utilized in the studies to derive the total reimbursable cost that would be involved in applying the excess water to the North Unit lands.

The total cost (\$2,631,000) would be the sum of the project cost (\$1,854,000) allocated to deferred acreage and the \$777,000 for the flume crossing pumping plant. Water users on the North Unit could repay \$1,198,000 in 50 years in addition to meeting necessary additional annual OM&R¹ costs of \$37,500 leaving an unpaid balance of \$1,433,000. It is emphasized that the North Unit lands are used for demonstrative purposes only and it is not intended to imply that the excess water would be committed to such lands.

The \$2,171,000 balance for the Ochoco Irrigation District lands and the \$1,433,000 balance for the North Unit lands, which are beyond the repayment ability of the respective water users, could be repaid by utilizing net surplus power revenues from one of the Federal dams on the Columbia River under provisions similar to those applicable to the Foster Creek Division, Chief Joseph Irrigation Project, as authorized by Act of July 27, 1954 (68 Stat. 568). It is estimated that it would take only about 123 days (74 days for the District lands and 49 days for the non-project lands) for the net surplus power revenues of The Dalles Project to repay these costs. With this aid all project costs allocated to the Ochoco Irrigation District lands would be repaid within a 50-year period. Also, the costs allocated to lands to utilize the excess project water could be returned in 50 years after such water is put to beneficial use. I recommend, therefore, that the Crooked River Project be authorized on the basis that net surplus power revenues from The Dalles Project of the Corps of Engineers be utilized to return the reimbursable costs beyond the water users' ability to repay.

I concur in and adopt the findings and recommendations of the Regional Director as set forth in paragraph 45 of his report and as modified or extended by this letter.

I recommend that you approve and adopt this report as your proposed report on the Crooked River Project and that you au-

¹ OM&R—Operation, maintenance, and replacement.

thorize me, in your behalf, to transmit copies to the States of the Columbia River Basin and to the Secretary of the Army in accordance with requirements of the Flood Control Act of 1944 (58 Stat. 887), to the State of Oregon for the views and recommendations of the head of the agency exercising administration over the wildlife resources of the State in accordance with provisions of the Act of August 14, 1946 (60 Stat. 1080), and to other interested Federal agencies for their comments.

Sincerely yours,

(Signed) W. A. DEXHEIMER,
Commissioner.

Approved and adopted: May 5, 1955.

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington 25, D. C., March 14, 1956.

The honorable THE SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This is in reply to your letter of January 6, 1956, submitting your report on the Crooked River project, Oregon, and requesting advice as to its relationship to the program of the President.

The project, which is designed primarily for irrigation, would involve construction of Prineville Dam to create a reservoir with a capacity of 155,000 acre-feet, a small diversion dam, a diversion canal 6.3 miles long, a distribution canal 14.8 miles long, two pumping plants, and necessary appurtenant works. The report states that operation of the proposed Prineville Reservoir in conjunction with the existing Ochoco Reservoir on Ochoco Creek will furnish a water supply initially to 20,210 acres of land in the Crooked River Basin in addition to providing 51,200 acre-feet of water for deferred irrigation.

The estimated project cost, including \$259,000 for an existing unit in the Cove power plant, is \$6,598,000 and is tentatively allocated as follows:

	<i>Reimbursable</i>	<i>Nonreimbursable</i>
Irrigation, Crooked River Basin:		
Ochoco Irrigation District	\$3,534,000	—
Non-District Lands	515,000	—
Deferred Irrigation	1,854,000	—
Flood Control	—	\$653,000
Fish and Wildlife	—	29,000
Recreation	—	13,000
Total	\$5,903,000	\$695,000

The economic and repayment analyses included in the report take into account the following additional reimbursable sums: (1) \$777,000 assigned to non-project facilities for deferred irrigation; and (2) \$617,000 representing present indebtedness of the Ochoco Irrigation District. Based on amortization of the project cost of \$6,598,000 and the cost of non-project deferred irrigation facilities over a 50-year period, the benefit-cost ratios are stated to be 1.25 using direct benefits and better than 2.0 using total benefits.

The repayment proposals presented in the report are summarized below.

Area	Estimated total reimbursable costs	Repayment over 50-year period	
		From water users	From other sources
Ochoco Irrigation District.....	\$4,151,000	\$1,980,000 (47.7%)	\$2,171,000 (52.3%)
Non-District lands.....	515,000	515,000 (100%)	----- (0%)
Deferred irrigation.....	2,631,000	1,198,000 (45.5%)	1,433,000 (54.5%)
Total.....	7,297,000	3,693,000 (50.6%)	3,604,000 (49.4%)

The report recommends that the project be authorized on the basis that net surplus power revenues from The Dalles project of the Corps of Engineers be utilized to return the reimbursable costs beyond the water users' ability to repay. On the basis of the above tabulation, these costs would amount to \$3,604,000.

In commenting on the report, the Corps of Engineers states that The Dalles project is entirely disassociated from the proposed irrigation improvements in the Crooked River Basin, and on this basis, questions the propriety of using net surplus power revenues from The Dalles project to return the reimbursable cost of irrigation beyond the water users' ability to repay. It suggests that the report be modified to eliminate linking the the repayment provisions with a specific project of the Corps of Engineers.

The Bureau of the Budget believes that the question of linking the irrigation repayment provisions of a disassociated project with a specific power project is a part of a broader policy question involving the establishment of a basin account for the Columbia Basin. It is understood that your Department is now making studies of the possibilities of deriving needed assistance for irrigation projects in the Pacific Northwest from the Federal power system in that area as a whole rather than from individual projects. Until such time as questions relating to the establishment of a basin account are resolved, we believe it would be preferable to recommend that reimbursable costs which are beyond the ability of the water users to repay within 50 years, exclusive of the permissible development period, be borne by the Federal Government as a contribution to irrigation. In that case, the letter transmitting the report to the Congress should include proposed language

stating the maximum amount of such contribution for incorporation in the authorizing legislation.

It is noted that approximately 34 percent of the usable storage contemplated for Prineville Reservoir is excess to the needs of project lands and would probably be utilized to irrigate other lands in the Deschutes River Basin. The incremental cost of this excess storage and the anticipated timing of its initial use are not set forth in the report. The Bureau of the Budget believes that normally such excess storage should be provided only if its cost does not exceed 15 percent of the construction cost of the project, and a repayment contract is signed with local interests prior to the initiation of construction agreeing to start repayment within 10 years. However, in this case, since data in the report and additional information furnished by your representatives indicate that the proposed excess storage will be utilized well within the 10-year period, we believe that its inclusion in the report is justified, even though the above conditions are not specifically met.

It appears that the recreational and fish and wildlife features of the proposed plan are of local rather than national significance. On this basis it would appear that the costs of these improvements should not be borne in their entirety by the Federal Government. The costs of preventing damages to existing fish and wildlife resources and the costs of minimum facilities necessary for the general protection and operation of the proposed development and for the accommodation and protection of the visiting public should be treated as a part of the overall costs and allocated to the basic purposes of the improvement.

In view of the sizeable secondary benefits involved in the project, the Bureau of the Budget believes that consideration should be given to a requirement for the establishment of a conservancy district to insure maximum justifiable contribution or repayment by those to whom secondary benefits of the project will accrue.

In the event the project is authorized by the Congress, we would expect that any request for funds to initiate construction would be accompanied by evidence that repayment contracts have been executed with the water users which are generally consistent with the estimates of repayment capacity set forth in the report.

Subject to your consideration of the foregoing comments, you are advised that there would be no objection to submission of the report to the Congress. No commitment, however, can be made at this time as to when any estimate of appropriation would be submitted for construction of the project if authorized by the Congress, since this would be governed by the President's budgetary objectives as determined by the then prevailing fiscal situation.

Sincerely yours,

(Signed) PERCY RAPPAPORT,
Assistant Director.

UNITED STATES DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., April 12, 1956.

HON. SAM RAYBURN,
Speaker of the House of Representatives,

MY DEAR MR. SPEAKER: My report on the Crooked River Project, Oregon, is transmitted herewith pursuant to the provisions of Section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

This project, in the general vicinity of Prineville, Oregon, would be essentially an extension and addition to the works of the Ochoco Irrigation District. The physical works provided would be Prineville Dam and Reservoir with associated diversion dam, canals, pumping plant and distribution facilities. They would provide an adequate irrigation water supply for approximately 20,210 acres of land, 9,990 acres which are now dry and 10,220 acres which currently receive insufficient water. In addition, Prineville Reservoir would provide 51,200 acre-feet of irrigation water annually for future use in the area. Flood control, drainage, recreation, and fish and wildlife benefits would result from the project.

The estimated cost of the proposed Crooked River Project, based on October 1954 prices, which are slightly below current price levels, is \$6,598,000. This cost is tentatively allocated \$5,903,000 to irrigation, \$653,000 to flood control, \$29,000 to fish and wildlife, and \$13,000 to recreation.

The report proposes that the costs allocated to irrigation be returned jointly by the water users and from surplus power revenues of The Dalles Project on the Columbia River now under construction by the Corps of Engineers. Studies indicate that within a 50-year period the water users can probably repay \$2,299,000, leaving \$3,604,000 to be repaid from surplus power revenues. The Bureau of the Budget, in its comments on the report, suggests that until such time as questions relating to the establishment of a basin account for providing financial assistance to irrigation in the Columbia River Basin are resolved, it would be preferable to recommend that the \$3,604,000 of financial aid required for the Crooked River Project be borne by the Federal Government as a contribution to irrigation.

Copies of the proposed report of this Department were transmitted to the States of Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming and to the Secretary of the Army for views and recommendations in accordance with Section 1 of the Flood Control Act of December 22, 1944 (58 Stat. 887), and to the agencies represented on the Inter-Agency Committee on Water

Resources for information and comments. Copies of all comments received are enclosed² with the report.

The report and all comments were transmitted to the President, via the Bureau of the Budget. Enclosed for your consideration along with our report is a copy of the letter of comments of March 14, 1956, from Assistant Budget Director Percy Rappaport.

Sincerely yours,

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

An act to authorize construction by the Secretary of the Interior of the Crooked River Federal reclamation project, Oregon. (Act of August 6, 1956, 70 Stat. 1058, Public Law 992, 84th Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the purpose of furnishing water for the irrigation of arid and semi-arid lands (including approximately twenty thousand acres of land in Crook County, Oregon) and for other beneficial purposes, the Secretary of the Interior is authorized to construct, operate, and maintain the Crooked River Federal reclamation project. The principal new works of the said project shall include a dam and storage reservoir at or near the Prineville site, a diversion dam and canal below said reservoir, and related pumping plants, canals, conduits, drains, and other facilities. The operation of said works shall be integrated with the operation of the existing Ochoco Dam and Reservoir and of the Government-owned generator in the Cove powerplant of the Pacific Power and Light Company, which works shall, for the purpose of this Act, be considered as works of the Crooked River project.

SEC. 2. In constructing, operating, and maintaining the Crooked River project, the Secretary shall be governed by the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto), except that (1) any contract entered into under section 9, subsection (d) of the Reclamation Project Act of 1939 (53 Stat. 1187, 1193; 43 U. S. C., sec. 485h) for payment of those portions of the costs of constructing, operating, and maintaining the project which are allocated to irrigation and assigned to be paid by the contracting organization shall provide for the repayment of the portion of the construction cost of the project assigned to any contract unit or, if the contract unit be divided into two or more blocks, to any such block over a period of not more than fifty years (exclusive of any permissible development period) or as near thereto as is consistent with the adoption and operation of a variable payment formula which, being based on full repayment within the said period under average conditions, permits variance in the required annual payments in the light of economic factors pertinent to the ability of the or-

² Excluded from this publication.

ganization to pay; (2) the construction charge obligation of the Ochoco Irrigation District set out in its contract with the United States dated April 24, 1950, may, if the district so elects, be merged with and paid under the same conditions as other obligations undertaken by it under this Act; (3) that portion of the cost of constructing the new works of the project which is allocated to irrigation but is beyond the ability of the water users to pay shall be charged to and returnable to the reclamation fund from net revenues derived by the Secretary of the Interior from his sale of power from The Dalles project, Oregon, which are over and beyond the amounts required to amortize the power investment therein, as provided in section 5 of the Act of December 22, 1944 (58 Stat. 887, 890; 16 U. S. C., sec. 825s), and to return interest on the unamortized balance of said investment; and (4) construction of any of the new works herein authorized shall not be commenced until the Secretary shall have certified to the Congress, in accordance with the provisions of the Act of July 31, 1953 (67 Stat. 261, 266), that an adequate soil survey and land classification of not less than twenty thousand acres of land to be served by the project has been made and that those lands are susceptible to the production of agricultural crops by means of irrigation or that their susceptibility to the sustained production of agricultural crops by means of irrigation has been demonstrated in practice. Those costs of constructing the project which are properly allocable to flood control and to the preservation and propagation of fish and wildlife as provided in existing law, and the like costs of operating and maintaining the same shall be nonreturnable and nonreimbursable under the reclamation laws.

SEC. 3. The Secretary is authorized, in connection with the Crooked River project, to construct minimum basic public recreational facilities and to arrange for the operation and maintenance of the same by an appropriate State or local agency or organization. The cost of such facilities shall be nonreturnable and nonreimbursable under the Federal reclamation laws.

SEC. 4. In order to promote the preservation and propagation of fish and wildlife in accordance with section 2 of the Act of August 14, 1946 (60 Stat. 1080, 16 U. S. C., sec. 661a), an appropriate screen and fish ladder shall be provided at the diversion canal headworks of the Crooked River project below Prineville Reservoir and a minimum release of ten cubic feet per second shall be maintained from said reservoir for the benefit of downstream fishlife during those months when there is no other discharge therefrom, but this release may be reduced for brief temporary periods by the Secretary whenever he may find that release of the full ten cubic feet per second is harmful to the primary purpose of the project.

SEC. 5. There are hereby authorized to be appropriated \$6,339,000 for construction of the new works of the Crooked River project, plus such amounts, if any, as may be required by reason of changes in the cost of construction work of the types involved therein as shown by engineering indices and, in addition thereto, such sums as may be required to operate and maintain said project.

DALTON GARDENS PROJECT

IDAHO

Funds were provided, without a finding of feasibility, for emergency rehabilitation of Dalton Gardens Project by the Interior Department Appropriation Act, 1954 (Act of July 31, 1953, 67 Stat. 261, Public Law 172, 83d Cong., 1st sess.)

PROVISIONS OF INTERIOR DEPARTMENT APPROPRIATION ACT, 1954

[Extract from] An act making appropriation for the Department of the Interior for the fiscal year ending June 30, 1954, and for other purposes. (Act of July 31, 1953, 67 Stat. 261, 266, Public Law 172, 83d Cong., 1st sess.)

* * * * *

Construction and Rehabilitation: For construction and rehabilitation of authorized reclamation projects or parts thereof (including power transmission facilities) and for other related activities, as authorized by law, to remain available until expended,* * * *Provided,* That not to exceed \$268,000 shall be available toward the emergency rehabilitation of the Dalton Gardens Irrigation Project, Idaho, to be repaid in full under conditions satisfactory to the Secretary of the Interior:* * *

DESCHUTES PROJECT

OREGON

The North Unit of the Deschutes project ¹ was found feasible by the Secretary on September 24, 1937, and approved by the President on November 1, 1937, pursuant to Section 4 of the act of June 25, 1910 (36 Stat. 836), and Subsection B of Section 4 of the act of December 5, 1924 (43 Stat. 702).

Construction of Haystack Dam and equalizing reservoir was authorized by act of Congress on August 10, 1954 (68 Stat. 679, Public Law 573, 83d Cong., 2d sess.)

OFFICE OF THE SECRETARY,
Washington, September 24, 1937.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The following report on the North Unit of the Deschutes Reclamation project, in Oregon, is made to you under the provisions of Section 4 of the act of June 25, 1910, 36 Sta. 835.

Section 4 of the act of June 25, 1910, provides in effect that after the date of that act no irrigation project to be constructed under the act of June 17, 1902 (32 Stat. 388) and acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924 (43 Stat. 701), provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineer-

¹ The Deschutes Project was initiated under the provisions of the Emergency Relief Appropriation Act of 1935.

The Crane Prairie Dam was approved for construction under the terms of the original project authorization, to replace an old existing dam which was inadequately constructed by the local people.

ing features, the cost of construction, land prices, and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

The various features of the North Unit of the Deschutes project requiring investigation and report under Subsection B, Section 4, Act of December 5, 1924, *supra*, will be discussed in the order in which presented in that subsection, as follows:

WATER SUPPLY

The Deschutes River has a substantially uniform flow throughout the year with most of the irrigation season waters in use by constructed canals. The winter flow is to be conserved by a reservoir of 209,000 acre feet capacity at the Wikiup site, which, the stream flow records indicate, will fill, or nearly fill, every winter. About 90% of the yield of the reservoir will be used by the North Unit Project and will, with small additional surplus waters, provide a full water supply for the project. A part of such waters is now in use for power production, and will be liberated for irrigation use by providing substitute power from another source.

ENGINEERING FEATURES Storage Reservoir

The Wikiup Reservoir site located on the Deschutes River about 40 miles above Bend requires a main dam 83 feet high above stream bed and 3,100 feet long and two auxiliary dikes with lengths of 14,900 feet and 3,600 feet respectively. The dam and dikes will be of the rolled earth embankment type, faced with rock riprap. A side channel spillway of 5,000 second-feet capacity is to be provided on the right abutment.

The reservoir area of 11,200 acres is largely covered with a heavy stand of lodge pole pine and considerable clearing is required.

Main Canal

The main canal will divert from the Deschutes River at an existing diversion dam in Bend and extend northerly a distance of 65 miles to the Agency plains near Paxton. The first 3.3 miles consist of enlargement of existing canals to a capacity of 1,500 second-feet to provide 1,000 second-feet of capacity for the project. To mile 29.0, the canal crosses a rolling lava mesa with variable but generally steep slopes. Near Terrebonne a steel siphon 7,660 feet long and 13.33 feet in diameter crosses the Crooked River. Between Terrebonne and the southerly end of the irrigable lands at mile 39, the canal follows a flat gradient along or near the Crooked River Gorge. At mile 32.2 it crosses Osborne Canyon in a

13' diameter steel siphon 1,115' long. Beyond mile 39.2 the canal extends easterly about 5 miles on the northerly slope of Juniper Butte, thence north in a series of earth sections and chute drops along the edge of the rough country to Metolius. Beyond Metolius, the main canal crosses Willow Creek in a 94-inch steel pipe siphon 1,640 feet long. The main canal terminates on the Agency plains 5.5 miles beyond the Willow Creek siphon.

A considerable portion of the main canal is located through rock cuts and considerable concrete and gunite lining are needed to reduce seepage losses.

Lateral System

Water is to be taken from the main canal and conveyed to the lands by means of three major laterals, with an aggregate length of 20 miles, having a capacity in excess of 100 second-feet and numerous smaller laterals. A system of sublaterals is planned to convey water from the main canal and major laterals to the farm ditches.

Miscellaneous Costs

To cover costs such as puddling canals, operation and maintenance during construction, possible future drainage of seeped areas, etc., a gross sum of \$500,000 is included under this item.

COST OF CONSTRUCTION BY FEATURES

Storage	\$2,540,000
Main canal	3,970,000
Major laterals	190,000
Minor laterals	800,000
Miscellaneous	500,000
Total	8,000,000

LAND PRICES, AND PROBABLE COST OF DEVELOPMENT

The North Unit comprises 50,000 acres of irrigable lands located around Madras, Oregon, most of which has, in times of better rainfall, been in cultivation with grain crops predominating. Houses and barns still dot the area, but many are unoccupied, the owners being engaged in a search for a livelihood elsewhere. Those who have managed to remain, can do so only with outside assistance. The weather records show that the area cannot be permanently farmed without irrigation. A repayment contract with the district containing these lands and agreements with individual land owners will provide for appraisal of the land on the basis of values without irrigation and for the sale at or below the appraised values, to new settlers, of holdings in excess of the areas required for a family, which are 40 acres for a single ownership, and 80 acres for a family.

FINDING REGARDING FEASIBILITY OF PROJECT

The foregoing data justify the conclusion that the project is feasible from an engineering and economic standpoint, and I accordingly so find and declare.

ADAPTABILITY OF LAND TO SETTLEMENT AND FARM HOMES

The land embraced in the project is of average fertility. Rough land and poor soil have been eliminated. The remaining land can easily be prepared for the effective application of water. If properly prepared for irrigation and properly cultivated, good yields of all crops grown in this locality are assured. With care in the selection of settlers, with farms suitably improved and equipped, success in farming may reasonably be anticipated.

PROBABLE RETURN TO RECLAMATION FUND
OF COST OF CONSTRUCTION

A finding is required that the reimbursable portion of the cost of construction will probably be returned to the reclamation fund. This is interpreted to mean that it will be returned within the maximum period fixed by Reclamation Law, which is in 40 years from the time the public notice that the works are completed is issued by the Secretary. The Acting Attorney General's decision of September 7, 1937, holds that a federal reclamation project may be constructed, as is contemplated here, partly by the use of money from the reclamation fund and partly with non-reimbursable funds from other sources.

It has been concluded that the settlers on the project can pay \$4.00 per acre per year for irrigation. Of this sum \$1.00 per acre will be required to meet costs for operation and maintenance of the irrigation system by the district following its construction by the Government. In the 40-year repayment period the amount repaid would then be \$6,000,000 or \$2,000,000 less than the estimated total cost of the project.

It is proposed to utilize CCC camps to do work having a value of at least \$2,005,000. About one-half of such work consists of clearing the reservoir site of brush and timber, an activity exceptionally suited to CCC camps. Other activities will comprise extensive assistance to engineers in developing the cheapest location for the main canal through rocky bad lands to reach the project, reconstruction of roads, preparation and assembly of concrete materials, and light construction work requiring a minimum of equipment and construction technique. Many of these workers will find the project a desirable place to live.

Because of the urgent need to improve the lot of the farmers still resident on the North Unit, to enable the return of those temporarily seeking a livelihood elsewhere, and to avoid abandonment of the communities dependent thereon, I recommend that construction of the North Unit of the Deschutes Project, together with the storage reservoir, be approved. The undertaking will pro-

vide healthful and instructive work for CCC camps on a constructive, wealth producing activity, for a number of years.

Sincerely yours,

(Signed) T. A. WALTERS,
Acting Secretary of the Interior.

Approved NOVEMBER 1, 1937.

(Signed) FRANKLIN D. ROOSEVELT.
President.

BUREAU OF RECLAMATION,
Washington, May 26, 1945.

Memorandum for ASSISTANT SECRETARY STRAUS.

By memorandum of May 23, you required further justification before approving as to form an amendatory repayment contract with the Jefferson County Water Conservancy District, which, among other things, would provide for increasing the maximum size of ownership from 80 acres per man and wife to 160 acres per family.

By teletype from the Associate Regional Director, a copy of which is attached, I have received additional justification. In substance, it is an analysis of detailed studies of four projects comparable with the Jefferson district as to soils, climate, markets, and other conditions. Those data are related to the standards of living that would provide full stable settlement of the Deschutes project. The livelihood standards are those established for the Pacific Northwest in Lloyd H. Fisher's recent studies made in collaboration with the Bureau of Reclamation and published under the title of "What is a Minimum Adequate Farm Income?" The data are related to the prevalence of various land classes on the Jefferson district. The analysis also gives proper consideration to the necessity for diversification in order to maintain productivity of the project lands.

The Associate Regional Director summarizes the findings based on those data as follows:

(1) That, as a maximum size of unit, the 40-80-acre limitation of the existing contract is unjustifiably low.

(2) That, in order to provide an average sized family with an adequate livelihood on project lands, a farm unit could range justifiably from 50 acres for best lands to sizes approaching 180 acres for poorest lands which are expected to be irrigated, with 160 acres a readily supportable and workable maximum.

(3) For the project as a whole, the average size of unit should be within the range of 75 or 80 acres, but that the average size probably will approach 70 acres.

The Associate Regional Director adds the following statement, "It's neither the desire nor the recommendation of this office that,

through establishment of 160 acres per family maximum, better lands in the project be operated in such large units. But, to provide control in terms of individual units of varying size would require stoppage of project pending enactment of fundamentally different legislation than now governs. Obviously, carrying through of War Food Program precludes such course. We are left, then, where we are on all private land projects, except the Columbia Basin—having to deal with limitation in terms only with maximums necessarily controlled by the poorest units which are to be irrigated.”

I concur in the Associate Regional Director’s findings with respect to the proper and justifiable maximum limitation of ownership as 160 acres per family.

I recommend that you approve as to form the contract herewith resubmitted.² In view of the May 29 date for which the district election has already been called, I urge that your approval be given at the earliest possible moment.

(Signed) H. W. BASHORE,
Commissioner.

Approved May 26, 1945.

(Signed) MICHAEL W. STRAUS,
Assistant Secretary.

HAYSTACK RESERVOIR

An act to approve an amendatory repayment contract negotiated with the North Unit irrigation district, to authorize construction of Haystack Reservoir on the Deschutes Federal reclamation project, and for other purposes. (Act of August 10, 1954, 68 Stat. 679, Public Law 573, 83d Cong., 2 sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the contract with the North Unit irrigation district in form substantially similar to that approved by the district directors on July 31, 1953, which has been negotiated by the Secretary of the Interior pursuant to section 7, subsection (a), of the Reclamation Project Act of 1939 (53 Stat. 1187, 1192; 43 U. S. C., 1946 edition, sec. 485), is approved and the Secretary of the Interior is authorized to execute it on behalf of the United States.

SEC. 2. The Secretary is authorized to construct the Haystack Dam and equalizing reservoir and related works as a feature of the Deschutes Federal reclamation project at a cost not in excess of an amount which, together with other project costs reimbursable and returnable to the United States pursuant to the terms and provisions of the contract approved by section 1 of this Act, does not exceed the maximum construction charge obligation of the North Unit irrigation district.

² Excluded from this publication.

EDEN PROJECT

WYOMING

Construction of the Eden project was recommended by the Secretary on August 7, 1940, and approved by the President September 18, 1940, under the terms of the act of May 10, 1939 (53 Stat. 685, 719). Construction was terminated by order of the War Production Board in December 1942. The act of June 28, 1949 (Public Law 132, 81st Cong.), authorized the Secretary to complete construction of the project.¹

OFFICE OF THE SECRETARY,
Washington, August 7, 1940.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: The Interior Department Appropriation Act, 1940, contains an appropriation of \$5,000,000, from which allocations may be made by you:

For construction, in addition to labor and materials to be supplied by the Works Progress Administration, of water conservation and utilization projects, * * * in the Great Plains and arid and semi-arid areas of the United States, * * *

All expenditures from the appropriation, and as much of the expenditures from the Work Projects Administration funds as you determine, are to be considered reimbursable. Hereinafter the appropriation item will be termed the "1940 Water Conservation Appropriation."

The Eden irrigation project in Sweetwater County in southwestern Wyoming, near the town of Eden, is the type of project that is contemplated to be constructed under the provisions of this item. This project was originally constructed to irrigate about 30,000 acres and was settled in 1910. Due in part to improper

¹ See Colorado River Storage project.

construction of irrigation works there are now only 9,000 acres in cultivation. It is proposed to construct storage works, build a drainage system, and rehabilitate the distribution system to serve 20,000 acres. The Farm Security Administration has found that there are opportunities to settle many distressed farm families on the project. The Work Projects Administration has reported that more than 400 workers who are living within two hundred miles of the project could be made available, provided suitable camp and transportation facilities were furnished. However, it is believed that construction will be more efficient if a part of the work is accomplished by forces from the Civilian Conservation Corps. Consequently, plans are being made to obtain the services of two CCC camps.

The lands to be irrigated are situated along both sides of Little and Big Sandy Creeks at and above their confluence. The soils of the project are predominantly sandy loams and under irrigation are capable of furnishing good yields of alfalfa, sweet clover, grains, and similar crops. The surrounding country contains some excellent range land. The principal industry of the present project is dairying, a ready market for the products of which is found at Rock Springs, Wyoming. The Eden project is not situated on a railroad but a new Federal highway passes through the project area, connecting it with the city of Rock Springs.

The existing irrigation facilities comprise the Eden reservoir of 12,300 acre-feet capacity, four small reservoirs at the headwaters of Big Sandy Creek of 2,500 acre-feet aggregate capacity, the Eden Canal of twenty miles length and a comprehensive system of laterals. The plan of development includes the construction of a new reservoir on Big Sandy Creek, as the investigations indicate that this will be more economical than the rehabilitation of the existing dam. It will be necessary to construct a four-mile outlet canal, to rehabilitate the present canal and distribution system, and to construct a drainage system for the entire 20,000 acres. The development program will also include the necessary rough land leveling.

The estimated cost of construction and land development, including the building of all irrigation structures, rough leveling and resettlement costs is \$2,445,000. The Department of Agriculture has made a survey of the project, and states its belief that the water users will be able to repay \$1,200,000 of this amount over a period of forty years and, in addition, to carry the annual costs for operation and maintenance. This reimbursable sum should be obtained from the 1940 Water Conservation appropriation. The remaining amount of \$1,245,000 required to construct the project is expected to be provided by the Work Projects Administration and the Civilian Conservation Corps. A tabulation is attached in which is shown a tentative breakdown of expenditures from the three funds. The estimate of expenditures from Work Projects Administration funds is based on the experience of the Bureau of Reclamation on construction with relief forces under the legislative provisions in effect prior to the fiscal year 1940. The efficiency is unknown with which the work can be constructed

under the present regulations and those that may be placed in effect before the work is done. Therefore, the estimate of Work Projects Administration funds required may need revision at some later date.

I recommend that the Bureau of Reclamation undertake the construction of the Eden Project; that appropriate bureaus of the Department of Agriculture conduct the land development program and the arrangements for settlement, repayment, and project operations; and that the National Resources Planning Board assist in the planning and coordinating field.

I recommend that the allocation of \$1,200,000 from the 1940 Water Conservation Appropriation be made to the Department of the Interior, Bureau of Reclamation, and that the Work Projects Administration be requested to give earnest consideration to the project applications which will be filed by the Bureau of Reclamation to obtain assistance in the construction of the Eden project.

The Bureau of Reclamation will reimburse the Department of Agriculture and the National Resources Planning Board for all services provided by these two agencies in connection with the construction of the project through transfers or advances from the funds made available to the Bureau of Reclamation.

The Acting Secretary of the Department of Agriculture has recommended, and I am in accord with his recommendations, that the following conditions as to excess and tenant operated lands should apply to this project:

1. No Water for Excess Lands. Water will not be delivered for use upon lands under one ownership in excess of an adequate sized unit to be determined by the Secretary of Agriculture. Excess lands to be eligible for the delivery of water must be sold at not to exceed the Government appraised price. In the event that the owner of lands in excess of an adequate sized unit has a water right which partially satisfies his needs for an adequate sized unit, he will be delivered only sufficient additional water to fully satisfy his needs upon his specifically designated adequate sized unit.

2. Water Delivery for Lands in Tenant-Operator Status. Water for an adequate sized unit will be permitted for use on land operated by tenants, only when the Secretary of Agriculture has approved the tenure arrangements, adequacy and condition of home and farmstead buildings and other structures, and the condition and ability of the land to meet rent and debt payments and provide a decent living for the tenant families.

He estimates that the Department of Agriculture will require approximately \$200,000 for its participation, in addition to a Work Projects Administration contribution of about \$225,000. This later sum is \$25,000 in excess of estimates made of funds required from the Work Projects Administration and Civilian Conservation Corps allocations, as shown on the attached ² tabulation entitled "Estimate of Expenditures." However, it is believed that the additional work indicated by the increase can be readily accomplished either by Work Projects Administration or Civilian Conservation Corps forces after the completion of the work proposed in this letter.

² Excluded from this publication.

It is contemplated that actual construction will not be undertaken until the Department of Agriculture has made sufficient progress in an effort to obtain control of the large holdings at prices which do not exceed appraised valuations to insure the successful operation of the project. The time required for the construction of the project will depend largely on the availability of Civilian Conservation Corps camps and relief labor and may extend to three or four years.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved September 18, 1940.

(Signed) FRANKLIN D. ROOSEVELT,
President.

An act to authorize completion of construction and development of the Eden project, Wyoming.
(Act of June 28, 1949, 63 Stat. 277, Public Law 132, 81st Cong., 1st sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Interior is authorized to complete the construction, including any necessary preconstruction surveys and investigations, of the irrigation features of the Eden project, Wyoming, as approved by the President on September 18, 1940 (Senate Document Numbered 18, Seventy-seventh Congress, first session (1941), page 29), with such modification in physical features as the Secretary of the Interior may find will result in greater engineering and economic feasibility: *Provided*, That of the construction costs of the irrigation features of the project not less than \$1,500,000 for the project of twenty thousand irrigable acres, or a proportionate part thereof based on the actual irrigable area as determined and announced by the Secretary of the Interior upon completion of the project, shall be reimbursable by the water users in not to exceed sixty years, and provision for the recovery thereof and for payment of the operation and maintenance costs of the irrigation features of the project shall be made by a contract or contracts satisfactory to the Secretary of the Interior: *Provided further*, That construction costs of the irrigation features of the project which are not hereby made reimbursable by the water users shall be set aside in a special account against which net revenues derived from the sale of power generated at the hydroelectric plants of the Colorado River storage project in the Upper Basin shall be charged when such plants are constructed.

SEC. 2. That the Secretary of Agriculture is authorized to complete the land development and settlement features of the project in accordance with the general plan approved by the President on September 18, 1940, including the acquisition of such lands, or interests in lands, as may be necessary, and the extension of technical advice and assistance to settlers in matters of farm practice, soil conservation, and efficient land use: *Provided, however*,

That the total reimbursable cost of the land development and settlement features of the project shall be not less than \$373,000 for the project of twenty thousand irrigable acres with proportionate adjustment, if necessary, based on the actual irrigable area as determined upon completion of the project.

SEC. 3. To carry out the purposes of this Act, the Secretary of the Interior and the Secretary of Agriculture are hereby authorized to allot any moneys available from appropriations heretofore made to the Department of the Interior and the Department of Agriculture, respectively, for "water conservation and utility projects" and "water conservation and utilization projects", and there is hereby authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, to the Department of the Interior and the Department of Agriculture, respectively, such sums of money as may be necessary to complete the project.

EKLUTNA PROJECT

ALASKA

The Eklutna project was found feasible by the Secretary on January 18, 1949, and was authorized by the act of July 31, 1950 (64 Stat. 382).

BUREAU OF RECLAMATION,
Washington, D. C., January 7, 1949.

THE SECRETARY OF THE INTERIOR.

SIR: This is my report on a plan for the development of the potential Eklutna project near Anchorage, Alaska, for the purposes of developing the hydroelectric power and recreational potentialities of Eklutna Lake. My report is based on the attached report of the Chief of the Alaska Investigations Office of the Bureau of Reclamation, dated October 1, 1948. I concur in the plan proposed in that report, and adopt it and the recommendations contained therein.

The recommended plan calls for the construction of a new dam to raise the level of Eklutna Lake by 2 feet; recreational facilities at the lake; a tunnel 4½ miles long leading from the lake through the mountain to the north; a penstock 1,250 feet long; a power plant of 30,000 kilowatts installed capacity at the base of the mountain; and transmission lines to conduct the energy to load centers in the vicinity of the city of Anchorage and in the Matanuska Valley.

The primary function of the project would be the production of electrical energy—energy which is urgently needed for military and industrial uses, and for meeting normal growth in domestic loads in the vicinity of the project. In addition to the firm power which would be produced to serve the aforementioned loads, a large amount of secondary power would also be produced and would be available for industrial uses and, if needed, for irrigation pumping during a portion of each year. The recreational facilities which are proposed to be built by the National Park Service as part of the project would provide an urgently needed outlet in this rapidly expanding area.

The total estimated cost of the project, taking into consideration Alaskan differentials and price levels prevalent in October 1948 is \$21,580,900 of which \$20,365,400 is for the power features of the project and is reimbursable. In the event that extraordinary

protection of the plant from attack by air is recommended by the Alaskan military command, the increased cost of the "protected type" installation over the installation shown in the report should be nonreimbursable. The remaining \$1,215,500, the National Park Service's estimate of the cost of providing the recreational facilities at Eklutna Lake should be nonreimbursable. The reimbursable project cost could be returned to the Government during a 52-year repayment period with interest at 3 percent by revenues secured from the sale of power.

Since the area in which the Eklutna project is to be built is known to be mineralized, it is possible that its construction—particularly the tunneling operation—might permit the recovery of valuable minerals, proceeds from the sale of which should be used to offset a portion of the reimbursable costs of the project.

Construction of the Eklutna project at the earliest practicable time is highly desirable. Inasmuch as the recommended plan of development has engineering feasibility and as all reimbursable costs would be repaid in full to the Federal Government, I recommend that the Eklutna project be authorized for construction as recommended by the Chief of the Alaska Investigations Office.

I recommend further that you adopt this report as your report on the Eklutna project, Alaska, and that you authorize me, in your behalf, to transmit copies of the report to other affected Federal agencies and the Governor of Alaska for their comments, prior to transmittal of the report to the President, and subsequently, to the Congress.

Respectfully yours,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved and adopted: January 18, 1949.

(Signed) J. A. KRUG,
Secretary of the Interior.

UNITED STATES DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, March 15, 1949.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: This is my report on the Eklutna Project, near Anchorage, Alaska. The report, prepared under the supervision of the Commissioner of the Bureau of Reclamation, recommends authorization for the construction of a hydroelectric power plant of 30,000 kilowatts installed capacity to meet urgent demands for power for domestic, municipal and military uses, and for meeting normal growth in commercial and industrial loads in this rapidly expanding area, and for the development of recrea-

tional facilities in connection with the project. Estimated cost of the project is \$21,580,900, of which \$20,365,400 is for the power features of the project, and the balance, \$1,215,500, is for recreational facilities. The costs allocated to power would be returned to the Government with interest through revenues derived from the disposal of power.

The Eklutna Project is strategically located to meet power needs in the Anchorage area, and in the Matanuska Valley to the north. Inasmuch as the city of Anchorage is the most rapidly growing city in the Territory of Alaska, and as the Matanuska Valley is the most rapidly developing agricultural area in the Territory, the Eklutna Project is a logical first step in a program for development of Alaska. Equally important, the project will meet the most urgent needs for power at military establishments in the vicinity of Anchorage. For these reasons, the early development of the Eklutna Project is highly to be desired.

The 80th Congress provided \$150,000 in the Interior Department Appropriation Act for fiscal year 1949 for the Bureau of Reclamation to make "engineering and economic investigations as a basis for legislation, and for reports thereon, relating to projects for the development and utilization of the water power resources of Alaska . . ." Under this authorization, the Bureau of Reclamation has prepared two reports, one on the general reconnaissance of the related land and water resources of Alaska with a view to enumerating the numerous and important potentialities which exist there, and one on a specific project which was selected for immediate attention because it is urgently needed. Both reports are for the consideration of the Congress, the reconnaissance report in connection with general legislation, and the Eklutna Project report for consideration of legislation to authorize construction of the project.

Following my approval of the report on the Eklutna Project on January 8, 1949, the Commissioner of Reclamation, although not required by law to do so, secured comments on the proposal from the Governor of Alaska and from the Department of the Army, the Department of Agriculture, the Department of Commerce, and the Federal Power Commission.

There is apparent unanimous opinion that the project is urgently needed. The Governor of Alaska endorses the project fully, and concurs in our recommendation for its prompt construction by the Bureau of Reclamation. The comments of the Department of Agriculture, Department of Commerce, and Federal Power Commission likewise recognize the urgent need for development of additional sources of electric power in the Anchorage area. In addition, the Commander-in-Chief of the Alaska Command, who is responsible for all the services of the military establishment in Alaska has commented favorably upon the project and volunteered his full support toward its early realization because of its value in meeting military and related civilian needs. Copies of these comments are attached ¹ to the report.

¹ Excluded from this publication.

The Department of Agriculture and the Department of the Army, however, suggest that the project be authorized for construction by two agencies other than the Bureau of Reclamation. The Secretary of Agriculture, while concurring in the need for the project, suggests that a bill recently introduced in the Congress, H.R. 224, would permit the Federal Works Agency to provide public power facilities for the Anchorage area. The Administrator of the Federal Works Agency, however, has advised me that, in his opinion, it is not the intent of this bill to authorize construction of large projects such as Eklutna by the Federal Works Agency. Instead, the purpose of the bill as he understands it and recommends, is to authorize public works which are normally financed by territorial, municipal, or other local governments. The Secretary of the Army states that the Corps of Engineers has the authority for construction of flood control, navigation, and related works in Alaska, and that the Corps should build this project.

Consideration of the facts makes it impossible for me to concur that other agencies are better equipped to do the task than the Department of the Interior. The Territory of Alaska has been under the administration of the Department of the Interior since it was originally purchased. The Department has a well-planned program for development and economic expansion of the Territory that will bring about an orderly and lasting stabilized economy, and provide underlying strength for the security of the Territory.

The Bureau of Reclamation, through 47 years experience in the design, construction, operation, and maintenance of similar projects in the western portion of the United States, is well qualified to construct hydroelectric power and other projects for the control and use of water in Alaska. The Bureau of Reclamation has an established office in Juneau, and a field office at Anchorage, Alaska, in which the Eklutna report was prepared, and from which construction of the Eklutna Project would be supervised. On the other hand, the civil functions of the Corps of Engineers, including its program of investigations and surveys for Alaska, are conducted by remote contact from its Seattle office. Hence, it appears that from the standpoints of concern for and overall responsibility for the development of Alaska, and from the standpoints of experience and on-the-ground organization, the Department of the Interior is eminently well qualified to proceed efficiently and expeditiously.

Accordingly, I recommend approval of the project as recommended in this report, and with your concurrence the report with its attached ² documents will be transmitted to the Congress for appropriate action.

Sincerely yours,

(Signed) J. A. KRUG,
Secretary of the Interior.

² Excluded from this publication.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington 25, D. C., June 30, 1949.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: Receipt is acknowledged of your letter dated March 15, 1949, submitting your report on the Eklutna project, near Anchorage, Alaska, prepared under the authorization contained in the Interior Department Appropriation Act, 1949. You recommend approval of the project as described in the report, prepared under the supervision of the Commissioner of the Bureau of Reclamation, which provides for the construction of a hydroelectric power plant of 30,000 kilowatts installed capacity to meet urgent demands for power for domestic, municipal and military uses at an estimated cost of \$20,365,400, to be reimbursable, and for development of recreational facilities in connection with the project at an estimated cost of \$1,215,500, to be non-reimbursable.

In support of these recommendations, the report and substantiating materials conclude that civilian and military requirements would absorb the full capacity and output of the proposed Eklutna power plant by 1954, that the project is highly desirable, urgently needed, has engineering and economic feasibility, and that a protected type power plant would be installed if required for military security. With respect to the recommendation that recreational facilities be developed at Eklutna Lake in connection with the project, it is noted that the usefulness of the existing lake for recreational purposes would not be increased by reason of construction and operation of the proposed dam and that no allocation of power costs to recreation benefits is proposed. The report anticipates the use of non-firm power for irrigation pumping at the farms but proposes no allocation of power costs to such benefits until investigations of irrigation potentialities now in progress disclose the amount of energy required. It is also noted that there would be no physical connection of the project with the farms since water from Eklutna Lake would not be diverted for this use due to its colloidal content and distance from farm areas.

The comments of the Governor of Alaska, the Commander-in-Chief, Alaskan Command, the Department of Commerce and the Federal Power Commission are favorable to the report. The Federal Power Commission states that staff studies and other information available to the Commission indicate there will be a market for the power developed and that the project would be desirable to assist in meeting the power needs. The Department of the Army points to the Corps of Engineers' responsibility for investigations and surveys of water development projects in

Alaska and recommends that if the project is authorized for construction, it be built by the Corps of Engineers to avoid duplication of engineering and construction facilities now available through the Corps in the Alaska area. While the Department of Agriculture emphasizes the need for abundant, low-cost power for efficient agricultural production and to encourage settlement, it takes exception to the stress placed upon the potentialities of irrigation and expresses the belief that certain generalizations made or implied are not warranted by available evidence either in Alaska or in countries of similar conditions elsewhere. In objecting to a statement of the Bureau of Land Management of the Department of Interior which appears on page 7 of the Appendix, the Department of Agriculture points out that investigations of the physical and economic feasibility of potential supplemental irrigation are a function of, and are being conducted by, that Department through the Alaska Agricultural Experiment Station.

In response to my request for comments on the report, the Secretary of Defense advises that he must support all projects, the cumulative effect of which will tend to develop the civilian economy in Alaska to a point of self-sufficiency. He informs me that if the Eklutna project is undertaken it will probably provide a satisfactory source of standby power for requirements of the national military establishment in the Anchorage area and thus will operate to reduce the ultimate construction of generating plant to carry future loads, but not the current program. He concurs with the Secretary of the Army in recommending authorization for construction by the Corps of Engineers, if the project is approved.

It would appear that the power features of the proposed Eklutna project can be justified and that there would be a market for the power produced. However, there is serious doubt at this time that an irrigation program of the type envisioned in the Reclamation laws is adaptable to the Alaskan situation. While there might be a place for irrigation on some farms, it will probably not be extensive, and will be of the individual farm, well and pump type. This will, of course, require the use of power for pumping. Since no physical water connection would exist between Eklutna Lake and the farms and since direct service to irrigation would be only through the supply of power, construction of the project need not be delayed pending completion of current investigations of irrigation potentialities as a basis for development of a policy for improvement of agriculture in Alaska. Inasmuch as the usefulness of the existing lake for recreational purposes is not increased by construction of the dam, the proposed development of recreation facilities at Eklutna Lake does not appear to be essential to authorization of construction of the power project. It seems desirable, therefore, to postpone consideration of the proposed recreational development at Eklutna Lake, pending a broader study which would determine the recreation needs of the entire Anchorage area and the order of their relative urgency.

In view of the foregoing, and of the present status of development of Alaska, I believe the proposed Eklutna project should be

considered as a power project without regard to irrigation or recreation potentialities, and that authorization of construction of the project under Federal Reclamation laws, and development of recreational facilities in connection with the project would not be justified at this time.

Therefore, in accordance with Executive Order 9384, approved October 4, 1943, and the President's letter to you, dated July 2, 1946, you are advised that, while there would be no objection to the submission of the Eklutna report to Congress, or to authorization of construction of the hydroelectric project by the Department of the Interior, its authorization as an extension of the Federal Reclamation laws and authorization of the development of recreational facilities at the project, would not be in accord with the program of the President at this time. It is requested that a copy of this letter accompany your submission of the report to Congress.

Sincerely yours,

(Signed) FRANK PACE, JR.,
Director.

UNITED STATES DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., September 14, 1949.

HON. ALBEN W. BARKLEY,
President of the Senate.

MY DEAR MR. PRESIDENT: Enclosed herewith is my report and findings on the Eklutna Project, Alaska. This report is submitted pursuant to the provision in the Interior Department Appropriation Act, 1949, which appropriated \$150,000 for the Bureau of Reclamation to make "engineering and economic investigations, as a basis for legislation, and for reports thereon, relating to projects for the development and utilization of the water power resources of Alaska."

In transmitting this report to the President on March 15, 1949, I recommended authorization for the construction of a hydroelectric power plant of 30,000 kilowatts of installed capacity and related facilities, including transmission facilities, at an estimated construction cost of \$20,365,400 and also authorization for the construction, as part of the over-all project, of recreational facilities estimated to cost \$1,215,500 additional.

In his letter to me dated June 30, 1949, concerning this report, the Director of the Bureau of the Budget stated:

Therefore, in accordance with Executive Order 9384, approved October 4, 1943, and the President's letter to you, dated July 2, 1946, you are advised that, while there would be no objection to the submission of the Eklutna report to Congress, or to authorization of construction of the hydro-electric

project by the Department of the Interior, its authorization as an extension of the Federal Reclamation laws and authorization of the development of recreational facilities at the project, would not be in accord with the program of the President at this time.

I concur in the foregoing conclusions and hereby amend my report accordingly.

There is apparent unanimous opinion that the Eklutna Project is urgently needed. It has engineering and economic feasibility and there is an assured market for the power that would be produced. It is a logical first step in a program of development to meet the expanding power requirements of the Territory of Alaska in the Anchorage area, which is not only the most rapidly developing area in Alaska but also one of paramount importance to the national defense.

Comments on the report have been secured by the Commissioner of Reclamation voluntarily from the Governor of Alaska and from the Department of the Army, the Department of Agriculture, the Department of Commerce and the Federal Power Commission. Copies of these comments are enclosed with the report. They confirm my findings on the need for the project.

Also enclosed is a copy of the letter from the Bureau of the Budget, referred to above, stating the relation of the report to the program of the President.

I recommend that the Eklutna Project, as modified herein to be consistent with the program of the President, be authorized for construction, operation and maintenance by the Department of the Interior. In reporting to the Committee on Interior and Insular Affairs of the Senate and to the Committee on Public Lands of the House of Representatives upon pending bills, S. 1966 and H.R. 940, dealing with the general subject of power projects in Alaska, I have suggested the form in which such an authorization might appropriately be granted.

Sincerely yours,

(Signed) J. A. KRUG,
Secretary of the Interior.

Identical letter sent to Hon. Sam Rayburn, Speaker of the House of Representatives.

AUTHORIZATION OF EKLUTNA PROJECT

An act to authorize construction of the Eklutna project, hydroelectric generating plant and transmission facilities in connection therewith, and for other purposes. (Act of July 31, 1950, 64 Stat. 382, Public Law 628, 81st Cong., 2d sess.)

* * * That in order to encourage and promote the economic development of the Territory of Alaska, to foster the establishment of essential industries in said Territory, and to further the

self-sufficiency of national defense installations located therein, the Secretary of the Interior (hereinafter referred to as the "Secretary") is authorized to construct, operate, and maintain the Eklutna project in the vicinity of Anchorage, Alaska, consisting of a low dam at Lake Eklutna, a diversion tunnel and penstock, a power plant with an installed capacity of thirty thousand kilowatts, transmission lines to Anchorage and other load centers, and related works (except recreational facilities) substantially in accordance with the plans and recommendations in the report adopted by the Secretary of the Interior on January 18, 1949, on file with the Committee on Public Lands of the House of Representatives and the Committee on Interior and Insular Affairs of the Senate at an estimated cost of \$20,365,400. The capital investment properly allocable to each unit of said project, as determined by the Federal Power Commission, shall be amortized over a reasonable period of years, and interest shall be charged on the unamortized balance of the full capital investment in said project at a rate of $2\frac{1}{2}$ per centum per annum and shall be covered into the Treasury of the United States to the credit of miscellaneous receipts. All minerals discovered in the course of constructing the Eklutna project are hereby reserved to the United States and may be sold or otherwise disposed of in such manner as may be prescribed by the Secretary, if he finds and so reports to the Congress in writing that the only economically practicable method of recovering the ore so reserved is to provide for the salvage of any minerals that may be contained in the excavated materials removed from the tunnel during the normal process of construction. The net proceeds from any such sale or other disposition shall be covered into the Treasury of the United States to the credit of miscellaneous receipts. The waters of Eklutna Lake and its tributaries which are required for the operation of the Eklutna project are hereby reserved for that purpose.

SEC. 2. Electric power and energy generated at the Eklutna project, except that portion required in the operation of such project, shall be disposed of in such a manner as to encourage the most widespread use thereof at the lowest possible rates to consumers consistent with sound business principles and the maintenance of adequate electric service, the rate schedules to become effective upon confirmation and approval by the Federal Power Commission. Such rate schedules shall be drawn having regard to the recovery (upon the basis of the application of such rate schedules to the capacity of the electric facilities of the project) of the cost of producing and transmitting the power and energy, including the amortization of the capital investment as provided in section 1 hereof. Preference in the sale of such power and energy shall be given to all public bodies and cooperatives on the same terms, and to Federal agencies. It shall be a condition of every contract made under this Act for the sale of power and energy that the purchaser, if it be a purchaser for resale, will deliver power and energy to Federal agencies or facilities thereof within its transmission area at a reasonable charge for the use of its transmission facilities. All receipts from the transmission and sale

of electric power and energy generated at said project shall be covered into the Treasury of the United States to the credit of miscellaneous receipts, save and except that the Treasury shall set up and maintain from the receipts for said project a continuing fund of \$200,000 to the credit of the Secretary and subject to expenditure by him, to defray emergency expenses and to insure continuous operation.

SEC. 3. The Secretary is authorized to perform any and all acts and enter into such agreements as may be appropriate for the purpose of carrying the provisions of this Act into full force and effect, including the acquisition of rights and property, and the Secretary, when an appropriation shall have been made for the commencement of construction or for operation and maintenance of said project, may, in connection with the construction or operation and maintenance of such project, enter into contracts for miscellaneous services for materials and supplies, as well as for construction, which may cover such periods of time as the Secretary may consider necessary but in which the liability of the United States shall be contingent upon appropriations being made therefor.

SEC. 4. Upon completion of amortization of the capital investment allocated to power, the Secretary is authorized and directed to report to the Congress upon the feasibility and desirability of transferring the Eklutna project to public ownership and control in Alaska.

SEC. 5. Wherever in this Act authority is vested in, or functions are to be performed by, the Secretary, such authority may be exercised, and functions performed, through such agencies of the Department of the Interior as he may designate.

SEC. 6. There are authorized to be appropriated the sum of \$20,365,400 for the construction of the Eklutna project, and, in addition, such sums as may be necessary for the operation and maintenance of such project.

An act to amend the act of July 31, 1950, (64 Stat. 382) relating to appropriations for construction by the Secretary of the Interior of the Eklutna project, Alaska. (Act of August 13, 1953, 67 Stat. 574-575, Public Law 260, 83d Cong., 1st sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Act of July 31, 1950 (64 Stat. 382), be amended as follows:

(1) By amending the first sentence of section 1 to read as follows: "That in order to encourage and promote the economic development of the Territory of Alaska, to foster the establishment of essential industries in said Territory, and to further the self-sufficiency of national defense installations located therein, the Secretary of the Interior (hereinafter referred to as the 'Secretary') is authorized to construct, operate, and maintain the Eklutna project in the vicinity of Anchorage, Alaska, consisting of a low dam at Lake Eklutna, a diversion tunnel and penstock, a

power plant with an installed capacity of thirty thousand kilowatts, transmission lines to Anchorage and other load centers, and related works (except recreational facilities) substantially in accordance with the plans and recommendations in the report adopted by the Secretary of the Interior on January 18, 1949, on file with the Committee on Public Lands of the House of Representatives and the Committee on Interior and Insular Affairs of the Senate at an estimated cost not to exceed \$33,000,000."

(2) By adding a new paragraph to section 1, as follows: "The continuation of construction of the Eklutna project beyond December 1, 1953, is hereby made contingent upon there being a finding by the Secretary by that date that he and the proper officials of the city of Anchorage, Alaska, have approved a form of contract whereby the city would agree to convey to the United States such hydroelectric and other properties, including water rights, as the Secretary has determined should be acquired by the United States in connection with the Eklutna project, and whereby in consideration therefor the United States would agree to deliver to said city electric energy upon terms which in the Secretary's judgment would accord said city just compensation for the properties agreed to be conveyed."

(3) By amending the last sentence of section 2 to read as follows: "All receipts from the transmission and sale of electric power and energy generated at said project shall be covered into the Treasury of the United States to the credit of miscellaneous receipts."

(4) By amending section 6 to read as follows: "There are authorized to be appropriated the sum of \$33,000,000 for the construction of the Eklutna project, and, in addition, such sums as may be necessary for the operation and maintenance of such project."

BUREAU OF RECLAMATION,
Washington 25, D. C., November 27, 1953.

Memorandum.

To: THE SECRETARY OF THE INTERIOR.

From: Commissioner, Bureau of Reclamation.

Subject: Continuation of construction—Eklutna project, Alaska

On September 4, 1953, Assistant Secretary Aandahl approved a draft of proposed contract with the city of Anchorage, Alaska, covering the acquisition of its Eklutna Powerplant and the rendering of electric service to the city. The draft had previously been approved by the Anchorage City Council and other proper officials of the city and was approved by the voters of the city at the regular election held on October 6, 1953. The contract is now in the process of being executed by the United States and the city.

In view of the facts and in compliance with the requirements of the Eklutna Project Act, as amended (67 Stat. 574), it is recommended that the Secretary or the Acting Secretary find, and by your approval hereof you do find, that you and the proper officials of the city of Anchorage, Alaska, have approved a form of contract whereby the city agrees to convey to the United States hydroelectric and other properties, including water rights, which you have determined should be acquired by the United States in connection with the Eklutna Project, and whereby in consideration therefor the United States agrees to deliver to the city electric energy upon terms which in your judgment accord the city just compensation for the properties agreed to be conveyed.

The continuation of construction of the Eklutna Project beyond December 1, 1953, is contingent upon the aforesaid finding being made by you.

(Signed) W. A. DEXHEIMER,
Commissioner.

Approved: November 30, 1953.

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

FALCON PROJECT

TEXAS

Construction of the Rio Grande International Dams Project was provided by the Treaty with Mexico dated November 27, 1945. Joint construction of the Falcon Dam by the International Boundary and Water Commission, United States and Mexico, was approved by Congress on October 5, 1949 (Public Law 312, 81st Cong. 1st sess., 63 Stat. 701). Electric energy generated at Falcon Dam, which is available to the United States, is delivered to the Secretary of the Interior for transmission and disposition in accordance with the Reclamation Project Act of 1939 by the Act of June 18, 1954 (Public Law 406, 83d Cong. 2d sess., 68 Stat. 255, 256).

RIO GRANDE INTERNATIONAL DAMS PROJECT (International Boundary and Water Commission)

MEXICAN TREATY AND PROTOCOL

Treaty with Mexico relating to the utilization of the waters of the Colorado and Tijuana Rivers and of the Rio Grande

[Treaty signed at Washington, February 3, 1944; Protocol signed at Washington, November 14, 1944; ratification advised by the Senate April 18, 1945, subject to certain understandings; ratification by the President November 1, 1945, subject to said understandings; ratified by Mexico October 16, 1945; ratifications exchanged at Washington November 8, 1945; proclaimed by the President November 27, 1945, subject to said understandings; effective November 8, 1945]

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

WHEREAS a treaty between the United States of America and the United Mexican States relating to the utilization of the waters of the Colorado and Tijuana Rivers, and of the Rio Grande (Rio Bravo) from Fort Quitman, Texas, to the Gulf of Mexico, was signed by their respective Plenipotentiaries in Washington on February 3, 1944, and a protocol supplementary to the said treaty was signed by their respective Plenipotentiaries in Washington on November 14, 1944, the originals of which treaty and protocol, in the English and Spanish languages, are word for word as follows:

The Government of the United States of America and the Government of the United Mexican States: animated by the sincere spirit of cordiality and friendly cooperation which happily governs the relations between them; taking into account the fact that Articles VI and VII of the Treaty of Peace, Friendship and Limits between the United States of America and the United Mexican States signed at Guadalupe Hidalgo on February 2, 1848,¹ and Article IV of the boundary treaty between the two countries signed at the City of Mexico December 30, 1853,² regulate the use of the waters of the Rio Grande (Rio Bravo) and the Colorado River for purposes of navigation only; considering that the utilization of these waters for other purposes is desirable in the interest of both countries, and desiring, moreover, to fix and delimit the rights of the two countries with respect to the waters of the Colorado and Tijuana Rivers, and of the Rio Grande (Rio Bravo) from Fort Quitman, Texas, United States of America, to the Gulf of Mexico, in order to obtain the most complete and satisfactory utilization thereof, have resolved to conclude a treaty:

* * * * *

ARTICLE 5

The two Governments agree to construct jointly, through their respective Sections of the Commission, the following works in the main channel of the Rio Grande (Rio Bravo):

I. The dams required for the conservation, storage and regulation of the greatest quantity of the annual flow of the river in a way to ensure the continuance of existing uses and the development of the greatest number of feasible projects, within the limits imposed by the water allotments specified.

II. The dams and other joint works required for the diversion of the flow of the Rio Grande (Rio Bravo).

One of the storage dams shall be constructed in the section between Santa Helena Canyon and the mouth of the Pecos River; one in the section between Eagle Pass and Laredo, Texas (Piedras Negras and Nuevo Laredo in Mexico); and a third in the section between Laredo and Roma, Texas (Nuevo Laredo and San Pedro de Roma in Mexico). One or more of the stipulated dams may be omitted, and others than those enumerated may be built, in either case as may be determined by the Commission, subject to the approval of the two Governments.

In planning the construction of such dams the Commission shall determine:

- (a) The most feasible sites;
- (b) The maximum feasible reservoir capacity at each site;
- (c) The conservation capacity required by each country at each site, taking into consideration the amount and regimen of its allotment of water and its contemplated uses;
- (d) The capacity required for retention of silt;

¹ Treaty Series 207; 9 Stat. 922; 18 Stat. (pt. 2, Public Treaties) 492.

² Treaty Series 208; 10 Stat. 1031; 18 Stat. (pt. 2, Public Treaties) 503.

(e) The capacity required for flood control.

The conservation and silt capacities of each reservoir shall be assigned to each country in the same proportion as the capacities required by each country in such reservoir for conservation purposes. Each country shall have an undivided interest in the flood control capacity of each reservoir.

The construction of the international storage dams shall start within two years following the approval of the respective plans by the two Governments. The works shall begin with the construction of the lowest major international storage dam, but works in the upper reaches of the river may be constructed simultaneously. The lowest major international storage dam shall be completed within a period of eight years from the date of the entry into force of this Treaty.

The construction of the dams and other joint works required for the diversion of the flows of the river shall be initiated on the dates recommended by the Commission and approved by the two Governments.

The cost of construction, operation and maintenance of each of the international storage dams shall be prorated between the two Governments in proportion to the capacity allotted to each country for conservation purposes in the reservoir at such dam.

The cost of construction, operation and maintenance of each of the dams and other joint works required for the diversion of the flows of the river shall be prorated between the two Governments in proportion to the benefits which the respective countries receive therefrom, as determined by the Commission and approved by the two Governments.

ARTICLE 6

The Commission shall study, investigate, and prepare plans for flood control works, where and when necessary, other than those referred to in Article 5 of this Treaty, on the Rio Grande (Rio Bravo) from Fort Quitman, Texas to the Gulf of Mexico. These works may include levees along the river, floodways and grade-control structures, and works for the canalization, rectification and artificial channeling of reaches of the river. The Commission shall report to the two Governments the works which should be built, the estimated cost thereof, the part of the works to be constructed by each Government, and the part of the works to be operated and maintained by each Section of the Commission. Each Government agrees to construct, through its Section of the Commission, such works as may be recommended by the Commission and approved by the two Governments. Each Government shall pay the costs of the works constructed by it and the costs of operation and maintenance of the part of the works assigned to it for such purpose.

ARTICLE 7

The Commission shall study, investigate and prepare plans for

plants for generating hydro-electric energy which it may be feasible to construct at the international sotrage dams on the Rio Grande (Rio Bravo). The Commission shall report to the two Governments in a Minute the works which should be built, the estimated cost thereof, and the part of the works to be constructed by each Government. Each Government agrees to construct, through its Section of the Commission, such works as may be recommended by the Commission and approved by the two Governments. Both Governments, through their respective Sections of the Commission, shall operate and maintain jointly such hydro-electric plants. Each Government shall pay half the cost of the construction, operation and maintenance of such plants, and the energy generated shall be assigned to each country in like proportion.

* * * * *

An act to authorize the carrying out of the provisions of article 7 of the treaty of February 3, 1944, between the United States and Mexico, regarding the joint development of hydro-electric power at Falcon Dam, on the Rio Grande, and for other purposes. (Act of October 5, 1949, Ch. 593, 63 Stat. 701, Public Law 312, 81st Cong., 1st sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in accordance with the provisions of understanding (a) of the Senate resolution of ratification of the treaty of February 3, 1944, between the United States and Mexico, the approval of the Congress is hereby given to the negotiation of an agreement, in accordance with the provisions of article 7 of said treaty, for the joint construction, operation, and maintenance on a self-liquidating basis for the United States share, by the two sections of the International Boundary and Water Commission, United States and Mexico, of facilities for generating hydro-electric energy at the Falcon Dam on the Rio Grande being constructed by the said Commission under the provisions of article 5 of the said treaty.

SEC. 2. There is hereby authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, such sums as may be necessary to carry out the provisions of this Act: *Provided*, That funds heretofore appropriated to the Department of State under the heading "International Boundary and Water Commission. United States and Mexico" shall be available for expenditure for the purposes of this Act.

An act to authorize the transmission and disposition by the Secretary of the Interior of electric energy generated at Falcon Dam on the Rio Grande. (Act of June 18, 1954, 68 Stat. 255-256, Public Law 406, 83rd Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the electric

power and energy generated at Falcon Dam, an international storage reservoir project constructed on the Rio Grande pursuant to the treaty of February 3, 1944, between the United States and Mexico (Treaty Series 994), which is made available to the United States under the provisions of said treaty and under such special agreements as may be concluded between the two Governments pursuant to the provisions of said treaty and not required in the operation of such international project, all as determined by the Commissioner of the United States Section, International Boundary and Water Commission, shall be delivered to the Secretary of the Interior (hereinafter referred to as the Secretary) who shall transmit and dispose of such power and energy in such manner as to encourage the most widespread use thereof at the lowest possible rates to consumers consistent with sound business principles, the rate schedules to become effective upon confirmation and approval by the Federal Power Commission. Rate schedules shall be drawn having regard to the recovery (upon the basis of the application of such rate schedules to the capacity of the electric facilities of the project) of the cost of producing and transmitting such electric energy, including the amortization of the capital investment allocated to power by the Secretary, in collaboration with the Secretary of State, over a reasonable period of years. Preference in the sale of such power and energy shall be given to public bodies and cooperatives. The Secretary is authorized, from funds to be appropriated by the Congress, to construct or acquire, by purchase or other agreement, only such transmission lines and related facilities as may be necessary in order to make the power and energy generated at said project available in wholesale quantities for sale on fair and reasonable terms and conditions to facilities owned by the Federal Government, public bodies, cooperatives, and privately owned companies.

SEC. 2. All receipts from the sale of electric power and energy disposed of by the Secretary pursuant to this Act shall be covered into the Treasury of the United States to the credit of miscellaneous receipts as shall also moneys received from the Government of Mexico for any energy which might be delivered to that Government by the United States Section of the International Boundary and Water Commission pursuant to any special agreement concluded in accordance with article 19 of the said treaty.

SEC. 3. The Secretary is authorized to perform any and all acts, including the acquisition of rights and property, and to enter into such agreements as may be appropriate for the purpose of carrying out the provisions of this Act applicable to him; and with respect to construction and supply contracts and the acquisition, exchange, and disposition of lands and other property, and the relocation thereof, the Secretary shall have the same authority which he has under section 12 and 14 of the Reclamation Project Act of 1939.

FLATHEAD (INDIAN) PROJECT

MONTANA

A letter dated April 26, 1907, from the Acting Commissioner of Indian Affairs requested that preliminary investigations on the Flathead Indian Reservation be made by the Bureau of Reclamation for the purpose of irrigation. The act of April 30, 1908 (35 Stat. 70), appropriated the sum of \$50,000 for surveys and commencement of construction of the Flathead (Indian) project. The project is now in operation by the Bureau of Indian Affairs.

DEPARTMENT OF THE INTERIOR.
OFFICE OF INDIAN AFFAIRS,
Washington, April 26, 1907.

The DIRECTOR OF THE RECLAMATION SERVICE.

SIR: During the last several years a considerable correspondence has passed between the United States Indian Agent of the Flathead Agency, Montana, and this Office in the matter of a system of irrigation for said reservation.

In his report of August 31, 1897, concerning the same matter, United States Indian Inspector McConnell said that it would be impossible to farm successfully in the Jocko Valley without irrigation, and suggested that the two systems then in use should be enlarged and an engineer familiar with irrigation work employed to outline the plan of irrigation which would make it possible to put in cultivation the entire valley.

The Indian Agent report on November 23, 1897, that the two systems then in use consisted of a flume and ditch about five miles in length, taking water from the south and east side of the Jocko River, and a ditch about the same length taken from the south side of Finley Creek.

In his report of February 27, 1900, the Indian Agent urged that some action should be taken looking to the building of ditches necessary to make it possible for every young Indian to secure a farm upon which he might, with reasonable diligence, be able to support himself and family.

Inspector W. H. Graves expressed the opinion in his report of December 27, 1900, concerning the conditions existing among the Flathead Indians, that a successful system of irrigation could be

carried out by means of a series of ditches that would be neither difficult nor expensive to construct.

In his report dated June 30, 1901, Special Agent Frank C. Armstrong also expressed the opinion that there should be a regular system of irrigation, and suggested that an engineer be sent to make an estimate as to the cost. Accordingly, Mr. W. E. Young, of Tooele, Utah, was employed under Department authority granted July 8, 1902, to prepare plans, estimates, etc., for a proposed system of irrigation, and on December 11, 1902, the Indian Agent transmitted the report of said engineer, dated December 10, 1902, in reference to an irrigation system for that portion of the reservation known as Mission Valley, and commenting thereon said that the plan provided for two ditches, one costing \$8,055 and the other \$42,970, and reported that the system would provide the necessary water to irrigate more than 25,000 acres of fertile land, and that the cost per acre would be less than \$2.

Subsequently, the Agent transmitted a report of Engineer Young, dated December 23, 1902, in the matter of the possibility and cost of an irrigation system for that part of the reservation known as Jocko Valley. Mr. Young estimated that the construction of the various canals, diversion weirs, etc., referred to in his report would cost \$93,900. He reported that although the cost per acre irrigated would be less than \$4, he had not the confidence in the productiveness of the soil nor in its lasting qualities to recommend the construction of the larger works referred to in his report. He recommended, however, the construction of certain smaller ditches which would furnish water sufficient to irrigate 8,000 acres, and would involve an expenditure of only \$5,100.

Your attention is also invited to the Act of Congress of April 23, 1904 (33 Stat. L., 302), which provides for the survey and allotment of lands embraced within the limits of the Flathead Indian Reservation, and the sale and disposal of all surplus lands after allotment.

In view of the various reports in the matter of an irrigation system for this reservation, it is considered desirable that the Reclamation Service cause a preliminary investigation to be made which will enable this Office to recommend such legislation, if any, as may be necessary to carry out an adequate system of irrigation for the lands to be allotted to the Indians and for the lands which may be opened to settlement. This investigation should be made as soon after July 1, 1907, as practicable—the expense thereof payable from the appropriation for the fiscal year ending June 30, 1908, for "Irrigation on Indian Reservations." In order that authority may be had for the necessary expenditure, you are requested to advise this Office as to the estimated cost of making the investigation referred to above.

The reports of Engineer Young, dated December 10, 1902, and December 23, 1902, are transmitted herewith for your information, with request that they be returned.

Very respectfully,

(Signed) C. H. LARRABEE,
Acting Commissioner.

DEPARTMENT OF THE INTERIOR,
RECLAMATION SERVICE,
November 12, 1907.

COMMISSIONER OF INDIAN AFFAIRS.

SIR: With reference to the Flathead Indian Reservation, the following resume is offered:

On April 8, 1907, the Acting Commissioner of Indian Affairs submitted a general statement indicating the Indian reservations where irrigation is being conducted, the conditions as regards future allotments of the lands, and among other items, provisionally allotted \$3,000 for surveys and examinations.

On April 26, 1907, the Acting Commissioner called attention to previous correspondence on the subject with the U.S. Indian agencies at the Flathead Agency and others and transmitted the reports of Engineer Young, dated December 10, 1902, and December 23, 1902.

In that letter he stated as follows:

In view of the various reports in the matter of an irrigation system for this reservation, it is considered desirable that the Reclamation Service cause a preliminary investigation to be made which will enable this office to recommend, etc.

The matter was informally discussed with Chief Engineer Code and the reservation was visited by Secretary and at the same time by Mr. F. H. Newell, Director, and Mr. H. N. Savage, supervising engineer of the Reclamation Service. As a result of these informal conferences engineering parties were placed in the field, early in July, under Mr. Robert S. Stockton, engineer, located at Huntley, Montana.

On August 16 the Director of the Reclamation Service wrote to the Commissioner of Indian Affairs from Deerfield, Kansas, calling attention to the fact that he had made a reconnaissance of the reservation and, with the informal authority of the Secretary of the Interior, had put parties in the field. Owing to the absence of Mr. Newell, Commissioner Luepp and others, the matter was not put in formal shape otherwise than in the letter of August 16. No reply was received to this letter.

The field surveys on this reservation have been nearly completed. The office compilation and plats showing the outline of possible development are now being worked up at the Huntley, Montana, office.

Very respectfully,

(Signed) CHAS. D. WALCOTT,
Director.

PROVISIONS OF INDIAN DEPARTMENT
APPROPRIATION ACT, 1909

[Extracts from] An act making appropriations for the current and contingent expenses of the Indian Department, for fulfilling treaty stipulations with various Indian tribes, and for other purposes, for the fiscal year ending June thirtieth, nineteen hundred and nine. (Act of April 30, 1908, 35 Stat. 70, Public Law 104, 60th Cong., 1st sess.)

* * * That the following sums be, and they are hereby, appropriated, out of any money in the Treasury not otherwise appropriated, for the purpose of paying the current and contingent expenses of the Indian Department, for fulfilling treaty stipulations with various Indian tribes, and in full compensation for all offices the salaries for which are specially provided for herein for the service of the fiscal year ending June thirtieth, nineteen hundred and nine, namely:

* * * * *

For preliminary surveys, plans, and estimates of irrigating systems to irrigate the allotted lands of the Indians of the Flathead Reservation in Montana and the unallotted irrigable lands to be disposed of under the act of April twenty-third, nineteen hundred and four, entitled "An Act for the survey and allotment of lands now embraced within the limits of the Flathead Indian Reservation in the State of Montana, and the sale and disposal of all surplus lands after allotment," and to begin the construction of the same, fifty thousand dollars, the cost of said entire work to be reimbursed from the proceeds of the sale of the lands within said reservation.

* * * * *

That in carrying out any irrigation project which may be undertaken under the provisions of the act of June seventeenth, nineteen hundred and two (Thirty-second Statutes, page three hundred and eighty-eight), known as the reclamation Act, and which may make possible, and provide for, in connection with the reclamation of other lands, the irrigation of all or any part of the irrigable lands heretofore included in allotments made to Indians under the fourth section of the general allotment Act, the Secretary of the Interior be, and he hereby is, authorized to make such arrangement and agreement in reference thereto as said Secretary deems for the best interest of the Indians: *Provided*, That no lien or charge for construction, operation or maintenance shall thereby be created against any such reserved lands: And provided further, That to meet the necessary cost of carrying out

this legislation, the Secretary of the Interior is authorized to expend, out of the sum appropriated in this Act for irrigation, an amount not exceeding thirteen thousand dollars.

UNITED STATES DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
January 12, 1924.

THE SECRETARY OF THE INTERIOR,
(Through the Commissioner of Indian Affairs).

MY DEAR MR. SECRETARY: Pursuant to your request, there is transmitted herewith an order for the transfer of the Flathead Indian irrigation project in Montana from the Bureau of Reclamation to the Bureau of Indian Affairs.

Respectfully,

(Signed) OTTAMAR HAMELE,
Acting Commissioner.

I concur:

(Signed) CHAS. H. BURKE,
Commissioner of Indian Affairs.

Approved January 15, 1924.

(Signed) HUBERT WORK,
Secretary.

January 15, 1924.

ORDER

As soon as practicable, but prior to the opening of the irrigation season of this year, the operation and maintenance of the irrigation system of the Flathead Indian Reservation, Montana, now in charge of the Bureau of Reclamation, shall be turned over to the Bureau of Indian Affairs and be administered under its sole supervision. Construction now underway shall continue under the Bureau of Reclamation until such time as it may be practicable to turn over the work to the Bureau of Indian Affairs, not later than December 31, 1924. Appropriate arrangements regarding the transfer of construction work, funds, property, records, etc., shall be made by the representatives of the two Bureaus, duly authorized by the Commissioners thereof.

(Signed) HUBERT WORK,
Secretary.

FORT PECK PROJECT

MONTANA-NORTH DAKOTA

The Fort Peck Dam was authorized for construction by the Corps of Engineers by the act of August 30, 1935 (49 Stat. 1028, 1034). The act of May 18, 1938 (52 Stat. 403), provided that the Secretary of War was responsible for completion of the dam and power plant and the Bureau of Reclamation was responsible for construction and operation of facilities for transmitting and marketing electric energy.

RIVERS AND HARBORS ACT, 1936

[Extract from] An act authorizing the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes. (Act of August 30, 1935, 49 Stat. 1028, 1034, Public Law 409, 74th Cong., 1st sess.)

* * * That the following works of improvement of rivers, harbors, and other waterways are hereby adopted and authorized, to be prosecuted under the direction of the Secretary of War and supervision of the Chief of Engineers, in accordance with the plans recommended in the respective reports hereinafter designated and subject to the conditions set forth in such documents; and that hereafter Federal investigations and improvements of rivers, harbors, and other waterways shall be under the jurisdiction of and shall be prosecuted by the War Department under the direction of the Secretary of War and the supervision of the Chief of Engineers, except as otherwise specifically provided by Act of Congress:

* * * * *

Missouri River, completion of improvement from mouth to Sioux City, Iowa, and construction of Fort Peck Dam; House Document Numbered 238, Seventy-third Congress.

COMPLETION OF FORT PECK PROJECT

[Extracts from] An act to authorize the completion, maintenance, and operation of the Fort Peck project for navigation, and for other purposes. (Act of May 18, 1938, 52 Stat., 403, Public Law 529, 75th Cong., 3d sess.)

* * * That for the purpose of improving navigation on the Missouri River, and for other purposes incidental thereto, the dam and appurtenant works now under construction at Fort Peck, Montana, and a suitable power plant for the production of hydro-electric power (which dam, power plant, and appurtenant works are hereinafter called Fort Peck project), shall be completed, maintained, and operated under the direction of the Secretary of War and the supervision of the Chief of Engineers, subject to the provisions of this Act relating to the powers and duties of the Bureau of Reclamation (hereinafter called the Bureau), as provided for in section 2 (a), respecting the transmission and sale of electric energy generated at said project. The Secretary of War shall provide, construct, operate, maintain, and improve at Fort Peck project such machinery, equipment, and facilities for the generation of electric energy as the Bureau may deem necessary to develop such electric energy as rapidly as markets may be found therefor. The electric energy thus generated and not required for the operation of the dam at such project and the navigation facilities employed in connection therewith shall be delivered to the Bureau for disposition as provided in this Act.

SEC. 2. (a) The electric energy generated in the operation of the said Fort Peck project shall be disposed of by the Bureau as hereinafter provided. The Bureau shall exercise the powers and perform the duties provided for in this Act under the supervision and direction of the Secretary of the Interior in accordance with the Act of May 26, 1926 (44 Stat. 657). The Bureau shall, as hereinafter provided, make all arrangements for the sale and disposition of electric energy generated at the Fort Peck project not required for the operation of the dam at such project and the navigation facilities employed in connection therewith. The form of administration herein established for the Fort Peck project is intended to be provisional pending the establishment of a permanent administration for Fort Peck and other projects in the Missouri River Basin. The Secretary of War shall install and maintain additional machinery, equipment, and facilities for the generation of electric energy at the Fort Peck project when in the judgment of the Bureau such additional generating facilities are desirable to meet actual or potential market requirements for such electric energy. The Secretary of War shall schedule the operations of the several electrical generating units and appurtenant equipment of the Fort Peck project in accordance with the re-

quirements of the Bureau. The Secretary of War shall provide and maintain for the use of the Bureau at said Fort Peck project adequate station space and equipment, including such switches, switchboards, instruments, and dispatching facilities as may be required by the Bureau for proper reception, handling, and dispatching of the electric energy produced at the said project, together with transformers and other equipment required by the Bureau for the transmission of such energy from that place at suitable voltage to the markets which the Bureau desires to serve.

(b) In order to encourage the widest possible use of all electric energy that can be generated and marketed and to provide reasonable outlets therefor, and to prevent the monopolization thereof by limited groups, the Bureau is authorized and directed to provide, construct, operate, maintain, and improve such electric transmission lines and substations, and facilities and structures appurtenant thereto, as it finds necessary, desirable, or appropriate for the purpose of transmitting electric energy, available for sale, from the Fort Peck project to existing and potential markets, and, for the purpose of interchange of electric energy, to interconnect the Fort Peck project with either private or with other Federal projects and publicly owned power systems now or hereafter constructed.

(c) The Secretary of the Interior is authorized, in the name of the United States, to acquire, by purchase, lease, condemnation, or donation, such real and personal property, or any interest therein, including lands, easements, rights-of-way, franchises, electric transmission lines, substations, and facilities and structures appurtenant thereto, as he finds necessary or appropriate to carry out the purposes of this Act. Title to all property and property rights acquired by said Secretary shall be taken in the name of the United States.

(d) The Secretary of the Interior shall have power to acquire any property or property rights, including patent rights, which in his opinion are necessary to carry out the purposes of this Act, by purchase, lease, donation, or by the exercise of the right of eminent domain and to institute condemnation proceedings therefor in the same manner as is provided by law for the condemnation of real estate.

(e) The Secretary of the Interior is authorized, in the name of the United States, to sell, lease, or otherwise dispose of such personal property as in his judgment is not required for the purposes of this Act and such real property and interests in land acquired in connection with construction or operation of electric transmission lines or substations as in his judgment are not required for the purposes of this Act.

(f) Subject to the provisions of this Act, the Bureau is authorized, in the name of the United States, to negotiate and enter into such contracts, agreements, and arrangements as it shall find necessary or appropriate to carry out the purposes of this Act.

SEC. 9. The Secretary of the Interior, the Secretary of War, and the Federal Power Commission, respectively, shall appoint such attorneys, engineers, and other experts as may be necessary

for carrying out the functions entrusted to them under this Act, without regard to the provisions of the civil-service laws, and shall fix the compensation of each of such attorneys, engineers, and other experts at not to exceed \$7,500 per annum; and they may, subject to the civil-service laws, appoint such other officers and employees as may be necessary to carry out such functions and fix their salaries in accordance with the Classification Act of 1923, as amended. In the administration of this Act the services of regular employees in the Bureau may be utilized and an equitable part of the salaries of such employees whose services are thus utilized may be charged by the Bureau to the operating costs of the power features of the Fort Peck project. The Bureau similarly may utilize and charge for facilities of the Bureau which economically can be used in connection with the administration of this Act.

SEC. 10. All receipts from transmission and sale of electric energy generated at the Fort Peck project shall be covered into the Treasury of the United States to the credit of miscellaneous receipts, save and except that the Treasury shall set up and maintain from such receipts a continuing fund of \$500,000, to the credit of the Bureau and subject to expenditure by it, to defray the operating expense of generation and transmission of power delivered to the Bureau for disposal under this Act, to defray emergency expenses and to insure continuous operation. There is hereby authorized to be appropriated from time to time, out of moneys in the Treasury not otherwise appropriated, such sums as may be necessary to carry out the provisions of this Act, including installation of equipment and machinery for the generation of electric energy, and facilities for its transmission and sale.

SEC. 11. The Secretary of the Interior may, in the name of the United States, under the supervision of the Attorney General, bring such suits at law or in equity as in his judgment may be necessary to carry out the purposes of this Act; and he shall be represented in the prosecution and defense of all litigation affecting the status or operation of the Fort Peck project by the United States attorneys for the districts, respectively, in which such litigation may arise, or by such attorney or attorneys as the Attorney General may designate as authorized by law, in conjunction with the regularly employed attorneys of the Bureau.

SEC. 12. If any provision of this Act or the application of such provision to any person or circumstances shall be held invalid, the remainder of the Act and the application of such provisions to persons or circumstances other than those as to which it is held invalid shall not be affected thereby.

FORT PECK (INDIAN) PROJECT

MONTANA

The Fort Peck (Indian) project was authorized by the act of May 30, 1908 (35 Stat. 558). Original construction was undertaken by the Bureau of Reclamation. The project is now in operation by the Bureau of Indian Affairs.

[Extract from] An act for the survey and allotment of lands now embraced within the limits of the Fort Peck Indian Reservation, in the State of Montana, and the sale and disposal of all the surplus lands after allotment. (Act of May 30, 1908, 35 Stat., 1558, Public Law 177, 60th Cong., 1st sess.)

* * * That the Secretary of the Interior be, and he is hereby, authorized and directed to cause to be surveyed all the lands embraced within the limits of the Fort Peck Indian Reservation, in the State of Montana, and to cause an examination of the lands within such reservation to be made by the Reclamation Service and by experts of the Geological Survey, and if there be found any lands which it may be deemed practicable to bring under an irrigation project, or any lands bearing lignite coal, the Secretary of the Interior is hereby authorized to construct such irrigation projects and reserve such lands as may be irrigable therefrom, or necessary for irrigation works, and also coal lands as may be necessary to the construction and maintenance of any such projects.

UNITED STATES RECLAMATION SERVICE,
Poplar, Montana, June 14, 1909.

The DIRECTOR, UNITED STATES RECLAMATION SERVICE,
Washington, D. C.

SIR: We, the undersigned engineers, have carefully considered the irrigation of the Fort Peck Indian Reservation.

Preliminary surveys were made during the season of 1908 covering irrigable lands as follows: 8,000 acres in the vicinity of Milk River Station with water supply from Big Porcupine Creek and storage; 2,000 acres in the vicinity of Frazer, with water

supply from Little Porcupine Creek and storage; 20,000 acres in the vicinity of Poplar, and extending along Poplar River a distance of about thirty-five miles, with water supply from Poplar River and storage at the forks of Poplar River and the West Branch; 15,000 acres lying along the west side of the Big Muddy River, with water supply from the Big Muddy River and storage at the mouth of Wolf Creek; 50,000 acres of clear second bench land, and approximately 25,000 acres of first bench land largely covered with brush and scattering cottonwood timber lying adjacent to the Missouri River and extending throughout the Reservation may all be irrigated with water from the Missouri River by a gravity canal heading near the site of Old Fort Peck.

Lying adjacent to and above this Missouri River Gravity Canal are two additional tracts of land which can be covered by pumping direct from the main canal with lifts of twelve and twenty feet respectively, one the "Galpin Bottom," comprising 6,000 acres and lying entirely outside of the Reservation and the other the "Milk River Bottom," comprising 6,000 acres lying wholly within the Reservation.

The water supply available from Big Porcupine Creek, Little Porcupine Creek, Poplar River and Big Muddy River is uncertain and undetermined, both as to total quantity and regularity of annual discharge. Both forks of the Poplar River and the Big Muddy River have their sources and a considerable percentage of their drainage areas in Canada. It is probable that eventually the entire quantity of water originating in Canada and now discharged through these streams will be diverted and used in Canada. The large area of land lying between the north boundary of the Ft. Peck Reservation and the Canadian boundary, as well as the equally large area lying within the Reservation and north of the comparatively narrow strip of Missouri River bottom and bench lands, are entirely dependent upon these four streams for water for irrigation and domestic purposes. The limited and uncertain water supply from these streams, together with the probability that the requirement for water along the streams will far exceed the available supply, renders reliance upon them as a source of supply for the irrigation of lands to be allotted to the Indians uncertain and, in our judgment, unwise.

Provided stream measurements extending over a considerable number of years should show the water supply to be sufficient and reliable, it is probable that lands could be irrigated by diversions from these streams at a construction cost per acre somewhat less than that of a gravity canal system taking out of the Missouri River; but the great uncertainty of the water supply, the complications which might arise owing to diversions in Canada, together with the fact that the Indians are now practically all settled and will desire allotments in the Missouri bottom lands lying between the river and the Great Northern Railway, lead us to believe the gravity system from the Missouri River to be the only one which at the present time can be properly considered for construction and the one which will prove adequate, reliable and for the best interests of the Indians.

The Missouri River Gravity Canal system as developed for construction takes out at a point about twelve miles west of the Reservation boundary line and the main canal throughout the Reservation follows approximately the line of the Great Northern Railway. The main canal has a total length of 104 miles, of which the last 32 miles extending from Poplar River to the Big Muddy River is really but a lateral in dimensions and its construction may be delayed until after the other works are completed. The almost total absence of cross drainage renders the location an unusually attractive one as regards economical construction and operation. Two concrete lined tunnels of lengths 1,600 and 2,700 feet respectively, and a siphon crossing at Milk River will be required. With the exception of the headworks, the Milk River siphon and a crossing for Little Porcupine Creek, the structures required will be comparatively small and such as are required chiefly for operation and maintenance, such as sluice-ways and turnouts.

Upwards of 50,000 acres of first class second bench land, unusually well adapted to irrigation, will be covered by the canal system outlined for first construction. There are no large engineering problems involved in the projected work nor is there any particularly heavy work to be encountered. The irrigable land is traversed from end to end by the transcontinental line of the Great Northern Railway along which stations are now located at intervals of about seven miles and which will materially reduce the construction costs of the works and insure the irrigators first class transportation facilities for surplus products.

In designing the works, the same policy has been adopted and will be followed as has governed design and construction of Reclamation Service projects. The projected system is very similar to the Lower Yellowstone Project work just completed and now in full commission, except that the features on Fort Peck Project are not of such magnitude and transportation facilities are of the best.

The estimates for the Fort Peck work are based upon current prices, at which it is believed the work can be completed in its entirety. It is estimated that the total cost of works to cover 50,000 acres including lateral canals, distributaries delivering water to each allotment, and an adequate system of waste water ditches, will be about \$40 per acre. In utilizing Indian labor in so far as practicable with consequent increased cost for engineering and superintendence due to the longer period of construction, it is possible that the cost may be increased 25 percent.

It is proposed to make final locations, immediately assemble and organize the forces and begin construction work as soon as possible in the vicinity of Frazer Station, the upper limit of the land to be irrigated by gravity from the main canal. As soon as it is practicable, it is proposed to start work at several points throughout the length of the Reservation in order to give as large a number of Indians work as near their homes as practicable. It is proposed at first to let no contracts for such work as can be performed by the Indians and to employ but little outside labor.

In case it is found that the Indians do not care to perform the work at a reasonable cost, the letting of small contracts will then be considered. The policy now in operation upon works under the direction of the Reclamation Service upon other Indian Reservations, of furnishing Indian employees with subsistence stores, supplies and forage at actual cost, will be carried out upon the Fort Peck work.

We are unanimous regarding all of the features of the project, the engineering solution of the problems presented, the policy outlined for beginning and prosecuting the work, and the probable cost of the same.

Very respectfully,

(Signed) CHAS. P. WILLIAMS.
H. N. SAVAGE.
W. H. SANDERS.

UNITED STATES RECLAMATION SERVICE,
Washington, June 29, 1909.

COMMISSIONER OF INDIAN AFFAIRS.

SIR: Enclosed herewith is copy of a report of the Board of Engineers, dated June 14, upon the irrigation of the Fort Peck Indian Reservation.

It is proposed, if your office finds no objection, to take up this work along the plan outlined in this report.

In copying this report the estimated cost has been omitted for the reason that being wholly preliminary the final cost is likely to deviate materially from it. The Engineers have estimated the cost in a broad way at about \$40, but the fluctuation in cost of materials and labor, and the unforeseen contingencies that arise in such construction may cause a considerable increase above that figure.

Very respectfully,

(Signed) F. H. NEWELL,
Director.

OFFICE OF INDIAN AFFAIRS,
Washington, July 12, 1909.

The DIRECTOR OF THE RECLAMATION SERVICE.

SIR: The Office has received your letter of June 29, transmitting a copy of the report of the Board of Engineers, dated June 14, on the proposed irrigation system for the Fort Peck Indian Reser-

vation and also your letter of July 1 forwarding a copy of a preliminary report dated March 3, 1909.

The Office sees no objection to taking up the work in accordance with the plan outlined. Will you kindly advise whether copies of these reports were sent to Chief Engineer Code and if not can you furnish him with them?

Very respectfully,

(Signed) F. H. ABBOTT,
Acting Commissioner.

TRANSFER ORDER

See Blackfeet (Indian) Project, page 119.

FORT SUMNER PROJECT

NEW MEXICO

The act of July 29, 1949 (63 Stat. 483), authorized the Secretary of the Interior to rehabilitate, operate, and maintain in accordance with Federal reclamation law the irrigation system of the Fort Sumner irrigation district in New Mexico and to construct all necessary works incidental thereto.

BUREAU OF RECLAMATION,
Amarillo, Tex., Region 5, October 7, 1946.

To: Commissioner, Bureau of Reclamation
From: Regional Director
Subject: Rehabilitation Plan for Fort Sumner Project—New Mexico

INTRODUCTION

1. A plan for rehabilitation of the Fort Sumner Irrigation District, adjacent to the Pecos River in De Baca County, east-central New Mexico, is presented in this report. It is intended to meet the urgent needs of the area and develop its potentialities through construction of a new diversion dam and rehabilitation of existing irrigation and drainage systems.

2. The report was prepared for the Department of the Interior by the Bureau of Reclamation. Substantiating materials on which it is based are appended. I recommend that you present the report for appropriate departmental action with a view to obtaining Congressional authorization for construction of the necessary works.

AUTHORITY FOR REPORT

3. This report is authorized to be made by virtue of Federal Reclamation Laws (act of June 17, 1902, 32 Stat. 388, and acts amendatory thereof or supplemental thereto).

* * * * *

DESCRIPTION OF AREA

Location and Resources

5. The Fort Sumner Project is located in the east-central part of New Mexico, near the town of Fort Sumner (see project map preceding page 1¹). The project lands lie entirely within the boundaries of the Fort Sumner Irrigation District, forming a narrow strip extending 12 miles along the east bank of the Pecos River. Rolling plains devoted to ranching surround the area.

6. The district contains approximately 8,000 acres of land, of which 6,500 acres would be irrigated. The balance of the district largely is in roads, ditches, dikes and waste lands along the river.

* * * * *

NEED FOR DEVELOPMENT

20. Rehabilitation of the Fort Sumner Irrigation District works, including construction of a stable diversion dam, is vitally needed to eliminate the constant threat of economic and social distress which would result to the residents of the area and adjoining vicinity from impairment of the district water supply. It also is needed to provide for more beneficial use of the district's land and water resources.

* * * * *

PLAN OF REHABILITATION

23. The rehabilitation plan has been designed to provide security for the project area and utilize its land and water resources to the greatest practical extent. The irrigated acreage would be increased to 6,500 by more efficient distribution of the district's decreed water supply and improved drainage.

24. The principal works in the plan include:

(a) Construction of a new concrete diversion dam 150 feet downstream from the damaged dam;

(b) Rehabilitation and enlargement of the present canal system;

(c) Installation of an adequate pumping plant to deliver water to the high line canal;

(d) Rehabilitation and extension of the drainage system.

* * * * *

27. The project would be operated by the Bureau of Reclamation until the end of the first full crop year after completion of

¹ Not included in this publication.

construction. Subsequently, it would be operated by the Fort Sumner Irrigation District under supervision of the Bureau.

* * * * *

CONCLUSION

39. Construction of the project is needed to stabilize and permit further development of the economy of the immediate and adjoining areas. The precarious condition of the diversion dam and inadequacy of other district works have hampered development of the area's resources and present a serious threat to continued productiveness of a large area.

40. Portions of the Pecos River flows to which the Fort Sumner Irrigation District has title and which are appurtenant to the project lands are adequate for irrigation of the project lands.

41. The plan of rehabilitation is justified economically by the benefits to the area, the surrounding region and the Nation. The ratio of estimated costs to measurable benefits is 1 to 2.38. In addition, the project would provide benefits not appraisable in dollar returns but which, nevertheless, are real.

42. The people of the area have evidenced their desire to proceed with the project. The plan is feasible as to engineering and is consistent with presently conceived development plans for the remainder of the Pecos River Basin.

RECOMMENDATIONS

43. It is recommended that:

(a) The plan of rehabilitation, as described in this report, be approved.

(b) The following principal works and such related works as may be incidental thereto, constituting the Fort Sumner Project, New Mexico, be authorized to be constructed, operated and maintained by the Bureau of Reclamation, Department of the Interior, substantially in accordance with the plans set forth in this report, with such modifications, omissions or additions to the works as the Commissioner of Reclamation, with the approval of the Secretary of the Interior, may find proper for carrying out the project to the end of providing water for the irrigation of approximately 6,500 acres of land in the acres indicated in this report, and of accomplishing the other purposes of the project, to wit:

(1) Construction of a diversion dam,

(2) Rehabilitation of the irrigation distribution system,

(3) Rehabilitation and extension of the drainage system.

(c) That the Bureau of Reclamation be authorized to perform land preparation on a reimbursable basis to the extent requested by landowners and deemed desirable by the Secretary of the Interior.

(d) That said Fort Sumner Project, New Mexico, be authorized to be constructed, operated, and maintained in accordance with

the Federal Reclamation Laws (act of June 17, 1902, 32 Stat. 388, and acts amendatory thereof or supplemental thereto);

Provided, (1) That this report shall be deemed to satisfy the requirements of the Federal Reclamation Laws governing the submission to the President and Congress of a finding of engineering feasibility. (2) That the water users be required, by contract with the United States, to pay, during the useful life of the project and at the maximum rate which in the judgment of the Secretary they can reasonably be expected to pay, the construction cost of the project; and that, during the period of contract with the United States, they shall pay for or otherwise provide adequate operation and maintenance, including replacements, of project works.

(Signed) WESLEY R. NELSON,
Regional Director.

BUREAU OF RECLAMATION,
Washington, March 5, 1947.

The SECRETARY OF THE INTERIOR.

SIR: A plan for the rehabilitation of the Fort Sumner Irrigation District, along the East Bank of the Pecos River, downstream from the town of Fort Sumner, De Baca County, New Mexico, is presented in this report which is based on the accompanying report of the Regional Director, Amarillo, Texas, dated October 7, 1946, and entitled, "Plan for rehabilitation of Fort Sumner Project, Pecos River, New Mexico." The Fort Sumner Project plan has been formulated to meet the urgent needs of the area by protecting and expanding its present economy through rehabilitation of an existing irrigation district.

Irrigation, essential for successful farming in this semi-arid area, was first initiated in 1863, and has been practiced continuously since 1903. The present Fort Sumner Irrigation District, which now operates the development, was organized in 1919. The district comprises about 8,000 acres of land. About 5,000 acres have been under irrigation in recent years, although a total of 6,650 acres was under irrigation in 1937. The development has been hampered by repeated failures of diversion dams constructed to serve the lands and by the ensuing financial difficulties. The district's existing diversion dam is in a precarious condition due to flood damages and the canals, the laterals, and drains, as well as the general farm improvements, are being allowed to deteriorate because of the land owners' fears that new floods might wash out the existing diversion dam and destroy their investments.

The project would protect the existing development against further financial loss due to failure of existing works and would provide sustained irrigation of 6,500 acres of irrigable land within the boundaries of the Fort Sumner Irrigation District (1,500 acres more than are now irrigated) through a more effi-

cient distribution of the district's ample water supply based on its decreed rights and through improved drainage. The principal works in the rehabilitation plan include: (1) construction of a new concrete diversion dam on a firm foundation to replace the present damaged structure; (2) rehabilitation and enlargement of the canal and drainage systems; and (3) installation of an adequate pumping plant to deliver water to the highline canal. The proposed construction is feasible from an engineering standpoint. The estimated cost of construction based on 1946 prices is \$1,798,000, all of which is properly allocable to irrigation.

As a test of the feasibility of this project, in accordance with the Federal Reclamation laws, consideration has been given to the average annual rate of repayment which could be made by the organized irrigation district representing the water users in the project area. It is estimated that the Fort Sumner Irrigation District would be able to repay \$26,000 annually toward the total construction cost in addition to payment by the district of the cost of operation and maintenance. This repayment is believed to be a reasonable allowance out of the annual gross crop income after suitable allowances are made for the cost of farm operation, an adequate level of living for the farm family and interest on investment. At this rate of \$26,000 annually, the irrigation district would be able to repay \$1,040,000 of the estimated construction costs over a period of forty years. If this period were extended, the irrigation district would be able to repay proportionately more of the construction costs. It would be able to repay \$1,300,000 in fifty years, \$1,560,000 in sixty years, and the total of \$1,798,000 (based on 1946 construction prices) in sixty-nine years. This latter period is considered to be well within the useful life of the project. The water users have expressed a willingness to continue annual payments toward the capital cost of the project beyond the normal forty-year repayment period, and have urged immediate construction of the project.

In his analysis of the project, the Regional Director has also considered the benefits which would accrue to the region and to the Nation as a whole as a result of the proposed work. There is no simple direct relationship between repayment ability and these over-all benefits of the project. The portion of the cost of the project which the farmer can afford to repay is necessarily only a portion of the returns which he receives. Similarly, the income to the farmer is only a portion of the benefits to be received by the region and the Nation. The benefits from the project include the safeguard of the capital investment already made as well as the support to the economy of the surrounding area, and the generation of commerce and industry. The annual benefits are estimated to be \$218,105 compared to the annual cost of \$91,350 (amortization of the rehabilitation costs in 50 years at 3 per cent equalling \$69,900 annually plus operation and maintenance costs of \$21,450 annually.) The resulting ratio of benefits to costs is 2.38 to 1.00. This analysis shows the project to be justified from the standpoint of the over-all economic results which will accrue from its construction. Means are not available for direct repay-

ment to the United States of sums equivalent to the benefits which will accrue to the region and to the Nation from construction of the project. As pointed out above, however, the United States will recover the construction cost of the project.

I recommend that rehabilitation of the Fort Sumner Irrigation District be authorized in accordance with plans set forth in the attached report of the Regional Director dated October 7, 1946, with such modifications as the Commissioner of Reclamation, with your approval, may find proper. I also recommend that this authorization be on the basis that the water users be required to pay, during the useful life of the project and at the maximum rate which in the judgment of the Secretary they can reasonably be expected to pay, the construction cost of the project; and that, during the period of contract with the United States, they shall pay for or otherwise provide adequate operation and maintenance, including replacements, of project works. There is, of course, the alternative that Congress may provide non-reimbursable funds for any portion of the construction cost which is beyond the ability of the water users to repay in that period which Congress may consider suitable for repayment.

I recommend that you adopt this report as your proposed report on the rehabilitation of the Fort Sumner Irrigation District and that you authorize me in your behalf to transmit copies of this letter and the attached proposed report to the affected States of New Mexico and Texas and to the Secretary of War in accordance with the requirements of the Flood Control Act of 1944; and to the head of the agency exercising administration over the wildlife resources of the State of New Mexico in accordance with the requirements of Public Law No. 732, 79th Congress.

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved March 13, 1947.

(Signed) J. A. KRUG,
Secretary of the Interior.

PROVISIONS OF SECOND DEFICIENCY APPROPRIATION ACT, 1948

[Extract from] An act making appropriations to supply deficiencies in certain appropriations for the fiscal year ending June 30, 1948, and for other purposes. (Act of June 25, 1948, 62 Stat., 1027, 1040, Public Law 785, 80th Cong., 2d sess.)

* * * That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, to supply deficiency appropriations for the fiscal year ending June 30, 1948, and for other purposes, namely:

* * * * *

Fort Sumner irrigation district, New Mexico: For the purpose of aiding and assisting the Fort Sumner Irrigation District in New Mexico to protect its diversion dam and the existing works of said irrigation district from flood damage, in the event the Secretary of the Interior determines that flood damage is or appears to be imminent, \$60,000, to be reimbursable and to remain available until expended.

AUTHORIZATION OF FORT SUMNER PROJECT

An act to authorize a project for the rehabilitation of certain works of the Fort Sumner irrigation district in New Mexico, and for other purposes. (Act of July 29, 1949, 63 Stat. 483 Public Law 192, 81st Cong., 1st sess.)

* * * That, for the purpose of providing water for the irrigation of approximately six thousand five hundred acres of arid lands on the Pecos River in New Mexico, the Secretary of the Interior is hereby authorized to rehabilitate, operate, and maintain in accordance with the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto) the irrigation system of the Fort Sumner irrigation district in New Mexico and to construct all necessary works incidental thereto: *Provided*, that the project shall not be initiated until contracts satisfactory to the Secretary of the Interior shall have been executed with—

(a) an irrigation or conservancy district, satisfactory in form and powers to the Secretary and embracing the lands of the project as determined by him, obligating the district, among other things, (i) to repay to the United States without interest the cost of rehabilitating and constructing the project, the terms to be such as will secure repayment as rapidly as, in the judgment of the Secretary, the district can reasonably be expected to make repayment and, in any event, within the useful life of the project; (ii) to pay for or otherwise provide adequate operation and maintenance, including replacements, of the project works during the period of the contract; and (iii) to furnish the Secretary with such control over and access to project works which are owned by or within the control of the district as he may require in order to safeguard the investment of the United States in the project; and

(b) the holder or holders of at least 90 per centum of the outstanding general obligation bonds of the Fort Sumner irrigation district providing for such refinancing or cancellation of those bonds and scheduling of payments of principal and interest called for thereby as the Secretary believes necessary in order to insure fulfillment of the obligations required under (a) above.

FRENCHTOWN PROJECT

MONTANA

The Frenchtown project¹ was found feasible by the Secretary on September 11, 1935, and approved by the President on September 21, 1935, pursuant to section 4 of the act of June 25, 1910 (36 Stat. 836), and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702).

OFFICE OF THE SECRETARY,
Washington, September 11, 1935.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The Supreme Court of the United States in the Parker Dam decision (*United States v. State of Arizona*) indicated that Section 4 of the Act of June 25, 1910 (36 Stat. 835), is applicable to irrigation projects constructed under the National Industrial Recovery Act and this report on the Frenchtown Project is made to you under said statute of 1910 and under Subsection B of Section 4 of the Act of December 5, 1924 (43 Stat. 701).

Section 4 of the Act of June 25, 1910, provides, in effect, that after the date of that act no irrigation project to be constructed under the Act of June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924 (43 Stat. 701), provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering

¹ The *Frenchtown Project* was initiated under the provisions of the National Industrial Recovery Act of 1933.

features, the cost of construction, land prices and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

The various features requiring investigation and report under this subsection will be discussed in connection with the French-town Project in Montana in the order in which they are presented, as follows:

WATER SUPPLY

Source

The source of the water supply for the project is the Missoula River. Pursuant to the laws of the State of Montana, the French-town Irrigation District has acquired the right to use 200 second feet of water with a priority date of October 14, 1933. There are some 7,000 acres of irrigable land in the project.

Adequacy

Water supply studies made by the engineers of the Bureau of Reclamation and engineers practising their profession in Montana and familiar with irrigation developments having the Missoula River as a source of water supply, indicate that the mean annual yield of the Missoula River will provide an ample water supply for the project under the priority acquired by the French-town Irrigation District.

ENGINEERING FEATURES

Diversion

A diversion will be required on the Missoula River. It is proposed to construct a low, concrete dam in a side channel of the river. The diversion works will raise the water surface of the river about four feet to permit diversion into the Main Canal of the Project.

Main Canal

The Main Canal, with an initial capacity of 172 second feet, extends, with a gradual reduced capacity, from the diversion works northwesterly for a distance of seventeen (17) miles, terminating at a point in the vicinity of Buson, Montana. The Main Canal requires two (2) railroad crossings, two (2) metal flumes, ten (10) road crossings, thirty-two (32) farm bridges, twenty-two (22) drainage culverts, and twelve (12) flumes to carry water for rights with priorities senior to that of the project, and two (2) wasteways.

Lateral System

Tapping the Main Canal at appropriate intervals, lateral ditches with smaller distributaries leading from them will convey the water to the boundaries of each farm unit of the project. The structures of the lateral system will be constructed of reinforced concrete.

Drainage

Comparatively good drainage conditions exist on the project, but it is possible that individual and community drains will be required to relieve seepage in local areas.

COST OF CONSTRUCTION

The estimated cost of construction is \$220,000, apportioned as to principal features as follows:

Diversion works	\$19,000
Main canal	82,800
Lateral system	45,800
Drainage system	37,500
Surveys, designs, inspection and general administration	34,900
Total	220,000

LAND PRICES AND PROBABLE COST OF DEVELOPMENT

The repayment contract executed by the Frenchtown Irrigation District provides for an appraisal of the project lands by a Board of Appraisal to be appointed by the Department, such appraisal to give no speculative value to lands on account of the prospective possibility of securing water through the project works. Improvements, including existing irrigation works and water rights at the time of the appraisal, will be appraised separately. Under the terms of the repayment contract the owners of the project lands are required to execute recordable contracts agreeing to sales of their lands at prices not exceeding those fixed by the Board of Appraisal; the execution of such contracts being a condition precedent to eligibility for water service from the project works.

All persons having the beneficial ownership of more than 160 irrigable acres of project land are required, under the terms of the repayment contract, to select the 160 acres to be retained for development under the project, failing in which the selection will be made by the Department or the Frenchtown Irrigation District.

All lands held in private ownership in excess of 160 acres of irrigable land will be appraised in a manner designated by the Department and the sale price thereof fixed by the Department on the basis of its actual bona fide value without reference to the proposed construction of irrigation works. The execution of recordable contracts agreeing to sale of excess lands in accordance

with the appraisal and on terms satisfactory to the Department, is a condition precedent to eligibility for water service for such lands from the project works.

The control of speculation in the project lands will safeguard the settlers of the project against the payment of excessive prices for farms on the project, and, with the exercise of reasonable prudence by the individual in his farming program, the cost of the development of a project farm will be within the economic limits conducive to successful farm operations.

ADAPTABILITY OF LAND TO SETTLEMENT AND FARM HOMES

The prevailing crop is now wheat. Grain of some kind is about all that can be raised under dry farming conditions. The irrigated sections in the vicinity raise very little grain but produce alfalfa, sugar beets, fruits, vegetables and similar crops in abundance. The soil and climate are well adapted to the production of Netted Gem potatoes which command the highest prices on the market. Feeding operations have been limited by the scarcity of hay. With an ample feed supply this industry should be very attractive on account of the large areas of forest reserve nearby for summer range.

The project is exceptionally well situated in regard to markets. Butte, Helena, Missoula and Spokane are all within a radius of 250 miles. These towns make it possible to market strawberries, raspberries and vegetables, which can be produced on the project and for which a high return per acre can be expected. Two trans-continental railroads and two main U. S. highways provide excellent transportation facilities. A sugar beet factory is located at Missoula. The 1933 crop brought the growers \$5.65 per ton which is the highest of any of the inter-mountain factory districts and is due to the nearby markets and consequent short haul on sugar.

The project is considered feasible from both engineering and economic standpoints. The estimated cost is well within the ability of the land to pay. The project can be justified by the fact that the land is all settled and in production; to place it under irrigation would eliminate wheat acreage and increase areas devoted to sugar beets, small fruits, potatoes and other crops of which there is no surplus and, due to the subdivision of large holdings, provide farm homes for many additional families in a locality having ideal living conditions, exceptional educational advantages due to the State University at Missoula, and unsurpassed recreational opportunities.

PROBABLE RETURN TO RECLAMATION FUND OF COST OF CONSTRUCTION

The next declaration required is that the cost of construction will probably be returned to the Federal government. This is interpreted to mean that it will be returned within the period

provided in the Frenchtown Irrigation District repayment contract, which is 40 years from the time the Secretary issues public notice that water is available from the project works.

The estimated cost of construction is \$220,000.00, which amount assumes a possible expenditure of approximately \$40,000.00 for future drainage requirements. The repayment contract executed by the District provides for the repayment of \$180,000.00 or the amount estimated as sufficient to construct the irrigation works exclusive of drainage works. The District has agreed to repay the irrigation system construction cost at the rate of \$4,500.00 per year for forty years. The project lands are believed to be possessed of sufficient productive ability to make the required annual payments on the irrigation system construction cost and in addition, to assume additional payments to meet the cost of drainage if the same be required as a result of irrigation.

The favorable conditions heretofore recited justify the belief that the project will return the cost thereof.

The project is regarded as one well suited to the needs of settlers and appropriate for development as a Federal reclamation project. I, therefore, recommend its approval and the issuance of the necessary authority to this Department to make contracts for its construction, and to proceed with the work.

Sincerely yours,

(Signed) CHARLES WEST,
Acting Secretary of the Interior.

Approved September 21, 1935.

(Signed) FRANKLIN D. ROOSEVELT,
President.

FRUITGROWERS DAM PROJECT

COLORADO

The Fruitgrowers Dam project¹ was found feasible by the Acting Secretary on January 5, 1938, and approved by the President on January 11, 1938, pursuant to section 4 of the act of June 25, 1910 (36 Stat. 836), and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702).

THE SECRETARY OF THE INTERIOR,
Washington, January 5, 1938.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The following report on the reconstruction of the Fruitgrowers Dam, near Austin, Colorado, is made to you under the provisions of Section 4 of the Act of June 25, 1910 (36 Stat. 835).

Section 4 of this Act provides in effect that after the date of said Act no irrigation project to be constructed under the Act of June 17, 1902 (32 Stat. 388) and Acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924, (43 Stat. 701), provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes and that it will probably return the cost thereof to the United States.

¹ The *Fruitgrowers Dam project* was initiated under the provisions of the Emergency Relief Appropriation Act of 1937.

The Fruitgrowers Dam is located on Alfalfa Run, three miles north of Austin, Colorado. The original dam was constructed in 1898 and was raised at least twice, the last time in 1936. The Fruitgrowers' Ditch and Reservoir Company, a Colorado corporation, owned and operated the reservoir and ditch system. The dam was breached June 13, 1937, to avoid a threatened failure. Excessive damage resulted in Austin from the heavy storage release, as the breach widened and deepened rapidly. Immediate reconstruction is necessary to avert heavy losses to the irrigators who have depended on the reservoir for water supply, as precipitation is too low for crop growth.

WATER SUPPLY

A small part of the stored waters is obtained from Surface Creek through the Alfalfa and Forrest ditches, and from local storm runoff and return flow waters draining from higher irrigated lands. Most of the water, especially in the drier years, is obtained from Current Creek by a ditch two miles long which has a capacity of about 100 second-feet. Based on past operations, the reservoir is expected to fill every year, providing ample water supply for all the irrigated lands of the project.

ENGINEERING FEATURES AND CONSTRUCTION COST

The dam which failed was 45 feet in height and 700 feet in length along the crest. The proposed dam is an earth and rock filled structure, 53 feet in height with a crest length of 1,500 feet and an embankment volume of 160,000 cubic yards. The dam will be located immediately downstream from the earlier structure, and a portion of the old dam will be used as the upstream toe of the new structure. The water surface of the reservoir will be raised two feet, increasing its storage capacity from 3330 acre-feet to 4100 acre-feet. The estimated cost, including engineering, overhead and contingencies, is \$200,000.

LAND PRICES AND ADAPTABILITY OF LAND TO SETTLEMENT AND FARM HOMES

The land area in the project covered by ditches from the Fruitgrowers Reservoir amounts to 3500 acres, of which 2050 acres were recently irrigated. The non-irrigated area is largely unfit for irrigation. The most important crops are peaches and small fruits. Alfalfa, sugar beets and general crops also are grown. There are many fine rural homes which have a domestic water supply and all modern conveniences. Lands are assessed at an average value of \$90 per acre, and the average value of improvements is about \$7500 per farm.

PROBABLE RETURN TO RECLAMATION FUND OF
COST OF CONSTRUCTION

The payment of construction costs will be derived from the sale of water for irrigation purposes. Based on a cost of \$200,000, and repayment according to terms of the Reclamation law in 40 years without interest, the annual charge will be \$5,000. Operation and maintenance of the reservoir feeder canal, the reservoir and the distribution system, and the costs accruing from administration, accounting and legal matters may total \$5,000 per year. If the present area of 2050 acres is continued, annual costs will be \$5 per acre per year.

A repayment contract will be executed before any waters are delivered, but it is desirable to commence construction of the dam without delay, and complete negotiations of contracts during the period of construction.

The Fruitgrowers Ditch and Reservoir Company is in debt for at least \$16,000, and damage suits are threatened on account of the failure of the dam. The financial condition of the irrigators is not clear, and it may be necessary to graduate the construction charge installments so that the payments will be small during the early years.

The lands are now actually settled and utilized for farm homes. They are well-improved and in full production. It is believed the water users can easily meet an eventual average annual charge of \$5 per acre, per annum, and probably an average charge as high as \$10 per acre could be paid in later years. It is, therefore, believed that the repayment of construction charges is well within the ability of the water users and that the cost of construction will be returned.

FINDINGS REGARDING FEASIBILITY OF PROJECT

The foregoing data justify the conclusions that the project is feasible from an engineering and economic standpoint, and I accordingly so find and declare.

An allocation of \$200,000 from emergency funds was made on October 7, 1937, to the Department of the Interior, Bureau of Reclamation, for the construction of the Fruitgrowers Reservoir. In order to complete the dam in time to store water for the season of 1938, and to prevent severe loss from the death of fruit trees, grape vines, and other perennial crops, I recommend that the construction of the dam be started at the earliest possible date.

Sincerely yours,

(Signed) OSCAR L. CHAPMAN,
Acting Secretary of the Interior.

Approved January 11, 1938.

(Signed) FRANKLIN D. ROOSEVELT,
President.

BUREAU OF THE BUDGET,
Washington, January 13, 1938.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: There is transmitted herewith the letter of Acting Secretary Chapman to the President of January 5, 1938, with reference to the Fruitgrowers Dam near Austin, Colorado, which was approved by the President on January 11, 1938.

Very truly yours,

(Signed) D. W. BELL,
Acting Director.

GARDEN CITY PROJECT

KANSAS

The Garden City project was authorized for construction by the Secretary under the Reclamation Act of 1902 on October 5, 1905. It was examined and reported upon by a Board of Army Engineers in accordance with the act of June 25, 1910 (36 Stat. 835), and approved by the President on January 5, 1911. The project was unsuccessful and the act of June 5, 1920 (41 Stat. 1054), cancelled the contracts between the Secretary and the water users' organization and individual landowners affecting lands in the Garden City project and released and discharged the liens upon the lands created by such contracts.

UNITED STATES GEOLOGICAL SURVEY,
RECLAMATION SERVICE,
Garden City, Kans., Sept. 5, 1905.

CHIEF ENGINEER,
*U. S. Geological Survey, Reclamation Service,
Washington, D. C.*

SIR: The Board of Engineers designated to consider the Garden City Project, Kansas, reports as follows:

The irrigation system proposed will depend upon the underground waters pumped from a series of wells in the coarse gravels in the bottoms of the Arkansas River valley, about twelve miles west of Garden City.

This water is to be carried to the Farmers Ditch and thence distributed to 8,600 acres of first class land lying under the existing ditch system.

The underground water supply has been explored under the direction of Mr. C. S. Slichter, and from his examinations, it appears that it is derived from the rain falling on the sandy porous soil, and from the seepage from the Arkansas River during periods of high water. This underground supply will be ample for 8,600 acres with two acre-feet per annum, and the indications are that a larger area can eventually be served.

The land in question is all in private ownership, and the existing irrigation system is owned by the Finney County Farmers Irrigation Association. The attempt to furnish water for the irrigation of these lands by a gravity system supplied by diversion from the river has proved a failure.

The estimated cost of the pumping plant, as outlined in the accompanying detailed statement is \$258,000, or \$30 per acre for 8600 acres. The annual charge for maintaining the plant in serviceable condition is estimated at 75 cents per acre. The annual cost for pumping and distribution is estimated at 77 cents per acre foot or \$1.45 per acre at the rate of two acre feet per annum, which is regarded as sufficient for attaining the best results.

These estimates are conservative and will probably cover all contingencies for increasing or extending the plant which may be necessary to furnish sufficient water supply.

From these estimates it appears that the maximum annual expense until the charges under the reclamation act have been fully paid will be \$5.20 per acre per annum, which will be diminished at the rate of 77 cents per acre-foot, if less than two acre feet of water are used.

In the opinion of this board the land in question will sustain such a charge.

The residents of this section will be ready to subscribe for water at this rate and have expressed their willingness to comply with all the requirements of the reclamation act.

The Finney County Farmers Irrigation Association proposes to transfer its irrigation system to the water users association now in process of formation, and at a recent meeting, informal pledges of subscription to the stock of the Water Users Association were given for practically the total of 8,600 acres entitled to water from the system.

In pursuance of these considerations the board recommends:

1. That the project be constructed as soon as the water users association has been organized in satisfactory form and practically the entire area of 8,600 acres under the Farmers Ditch System has been subscribed to the Water Users Association.

2. That the preparation of plans and specifications for construction be undertaken at once, so that there shall be no delay in beginning construction after the organization of the Water Users Association has proceeded to the proper stage.

Respectfully,

(Signed) MORRIS BIEN,
Supervising Engineer.
H. A. STORRS,
Elec. and Mech. Expert.
O. H. ENSIGN,
Cons. Engr. and Elec. Expert.
CHAS. S. SLICHTER,
Consulting Engineer.
W. H. SANDERS,
Consulting Engineer.

UNITED STATES GEOLOGICAL SURVEY,
Washington, D.C., September 14, 1905.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: During two seasons a field party has been engaged on the investigation of underground waters and possible reclamation in the valley of the Arkansas near Garden City, Kansas.

Measurements have been made of the velocity of the underground waters and the probable quantity which may be expected from the large pumping projects. The ground is remarkably open and the water plane close to the surface so that a large water supply may be obtained by a very moderate lift.

All attempts to furnish water for the irrigation of lands in this vicinity by gravity systems supplied by diversion from the river, have proved failures. This is due to the rapid loss of water from the river to the underground reservoir and the uncertain supply of water in the river.

The investigations of the engineering parties have led to plans for a pumping system which will utilize what is known as the Farmers Canal for distribution purposes and give an ample water supply for 8,600 acres of land. The plans have been carefully reviewed by a board of engineers consisting of Messrs. O. H. Ensign and H. A. Storrs, electrical and mechanical experts; Messrs. Chas. S. Slichter and W. H. Sanders, consulting engineers, and Mr. Morris Bien, supervising engineer. They report that an ample supply of water may be furnished at a cost for installation of not to exceed \$258,000 or \$50 per acre for 8,600 acres and that the annual cost for pumping and distribution is estimated at about \$1.50 per acre per annum. They state that those estimates are conservative and will probably cover all contingencies for increasing or extending the plant which may be necessary to furnish sufficient water supply.

From these estimates it appears that a maximum annual expense until the charges under the Reclamation Act have been fully paid will be \$5.20 per acre per annum, which will be diminished in such years as the rain-fall is sufficient to reduce the requirements for irrigation water. The board reports that the lands in question will sustain such a charge and that the residents of this section will be ready to subscribe for water at this rate and have expressed their willingness to comply with all the requirements of the Reclamation Act. The land is all in private ownership.

The Finney County Farmers Irrigation Association proposes to transfer its irrigation system to the Water Users' Association now in process of formation and at a recent meeting informal pledges of subscription to the stock of the Water Users' Association were given for practically the total of 8,600 acres, entitled to water from the system.

In pursuance of these considerations the board recommends that the project be constructed as soon as the water users association has been organized in satisfactory form, and practically the entire area of 8,600 acres under the Farmers Ditch system have been subscribed to the water users association.

I have the honor to concur in the recommendations of the board and to recommend that the project be approved, and that I be authorized to inform the water users association in Finney County that the project outlined by the engineers will be constructed by the Reclamation Service as soon as practicable after the complete subscription in the usual manner of all the lands to be benefited in order to insure the return of the fund in accordance with the provisions of the Reclamation Act.

In this connection I desire to call attention to the fact that this project has not before been definitely brought to the attention of the Department, also that an examination of the reclamation fund justifies the belief that there will be ample funds for its construction.

Very respectfully,

(Signed) H. C. RIZER,
Acting Director.

OFFICE OF THE SECRETARY,
Washington, September 16, 1905.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: Concurring in the recommendation by the board of engineers named in your communication of the 14th instant and of the Acting Director, the Garden City, Kansas, Reclamation Project is hereby approved and you are authorized to inform the Water Users Association in Finney County in said State that the project outlined by the engineers will be constructed by the Reclamation Service as soon as practicable after the complete subscription in the usual manner of all the lands to be benefited in order to insure the return of the fund in accordance with the provisions of the Reclamation Act.

Very respectfully,

(Signed) THOS. RYAN,
Acting Secretary.

OFFICE OF THE SECRETARY,
Washington, September 18, 1905.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: Referring to Departmental letter of the 16th instant approving, on your recommendation, the Garden City irrigation project, I have to advise you that after further consideration of the matter and of the statement filed with your letter of September 1, 1905, in the Owens Valley matter in which you show a probable deficit of \$2,350,000.00 in the Reclamation Fund for the fiscal year ending June 30, 1907, said action of the 16th instant approving said Garden City project is hereby recalled and canceled for further consideration of said project by the Department.

The Department does not feel justified in taking any action that would render even probable a deficit in the Reclamation Fund at any time.

Very respectfully,

(Signed) THOS. RYAN,
Acting Secretary.

OFFICE OF THE SECRETARY,
Washington, October 5, 1905.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: Referring to my letter of September 18, in the matter of the Garden City Reclamation Project, I have to advise you that after consideration of the matter and of your letter and recommendation of September 14, 1905, in relation thereto said project is hereby approved and you are hereby authorized in accordance with your said recommendation to inform the Water Users Association in Finney County, that the project outlined by the engineers will be constructed by the Reclamation Service as soon as practicable after the complete subscription in the usual manner of all the lands to be benefited in order to insure the return of the fund in accordance with the provisions of the Reclamation Act.

This action is taken in view of the statement of your said letter of September 14, 1905, "that an examination of the reclamation fund justifies the belief that there will be ample funds for its construction."

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

REMOVAL OF GARDEN CITY PROJECT LIENS

An act for the relief of the Garden City (Kansas) Water Users' Association, and for other purposes. (Act of June 5, 1920, 41 Stat. 1054, Public Law 268, 66th Cong., 2d sess.)

That the contracts affecting lands in the Garden City project of the Reclamation Service in Finney County, Kansas, heretofore entered into between the Finney County Water Users' Association of Finney County, Kansas, or with individual landowners, and the Secretary of the Interior for the supply and use of water from the irrigation plant of the United States be, and the same are hereby, canceled and relieved; and the liens upon the lands in said county created by such contracts are hereby released and discharged.

GILA PROJECT

ARIZONA

The Gila project ¹ was found feasible by the Secretary on June 8, 1937, and approved by the President on June 21, 1937, pursuant to section 4 of the act of June 25, 1910 (36 Stat. 836), and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702). The act of July 30, 1947 (61 Stat. 628) relocated the boundaries, reduced the acres, and reauthorized the project.

The act of June 13, 1949 (63 Stat. 172), ² authorized the furnishing of water to the Yuma Auxiliary project through the works of the Gila project (63 Stat. 172).

OFFICE OF THE SECRETARY,
Washington, June 8, 1937.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The following report is made to you on the First Division of the Gila Reclamation project, Arizona, under Section 4 of the Act of Congress of June 25, 1910, 36 Stat., 385 and under Subsection B of Section 4 of the Act of December 5, 1924, 43 Stat., 701.

Section 4 of the Act of June 25, 1910, provides in effect that after the date of that act no irrigation project to be constructed under the Act of June 17, 1902 (32 Stat., 388) and acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4 of the Act of December 5, 1924, provides as follows:

¹ The *Gila Project* was initiated under the provisions of the Emergency Relief Appropriation Act of 1935.

² See Yuma Auxiliary project, page 1033.

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States. (43 Stat. 702).

By the Act of Congress of June 22, 1936, 49 Stat., 1757, 1784, \$1,250,000 was appropriated for the continuation of construction of the Gila project, under the reclamation laws, the project having been initiated (1) by an allotment of \$75,000 under Title II of the National Industrial Recovery Act of June 16, 1933, 48 Stat. 195, and (2) by allocation of \$2,000,000 under the Emergency Relief Appropriation Act of 1935, approved April 8, 1935, 48 Stat., 115.

The Gila project comprises the irrigable lands on both sides of Gila River, in southwest Arizona, susceptible of irrigation from the Colorado River, within feasible pumping lifts, with cheap power which can be made available for this purpose from developments on the Lower Colorado River. No other source of water exists. Lands agriculturally suitable for irrigation total 585,000 acres below elevation 600, and this total may in the future be modified either way in the light of operating experience with the initial unit. The project is unusually well adapted to development by divisions in this manner.

The project for which authorization is now desired, comprises an initial division of 150,000 acres in the immediate vicinity of Yuma, Arizona, including 10,000 acres already irrigated from Colorado River, but requiring better facilities.

The various features requiring investigation and report under Subsection B, Section 4, Act of December 5, 1924, *supra*, will be discussed in the order in which presented in that subsection, as follows:

WATER SUPPLY

The flow of Colorado River, regulated by the Boulder Dam, will be ample for the project as well as all other contemplated drafts thereon.

Section 4 of the Boulder Canyon Project Act (45 Stat. 1058) reads:

The states of Arizona, California, and Nevada are authorized to enter into an agreement which shall provide (1) that of the 7,500,000 acre-feet annually apportioned to the lower basin by paragraph (a) of article III of the Colorado River Compact, there shall be apportioned * * * to the state of Arizona 2,800,000 acre-feet for exclusive beneficial consumptive use in perpetuity.

While an agreement has not been concluded by the states, there is no doubt that such an agreement when reached will insure a full water supply for at least the initial division of the project. In all sales of water rights it will be necessary to prescribe that the water supply of the project is subject to the Colorado River

Compact, and to the Boulder Canyon Project Act and to the sales of water under the compact and said act and to the treaty which it is anticipated will be made with Mexico fixing that country's rights in the flow of the Colorado River.

ENGINEERING FEATURES

Project waters will be diverted at the eastern end of the Imperial Dam being constructed to supply primarily the All-American Canal. A canal of 1900 second-feet capacity, 17 miles long, will lead to a main pumping plant located 12 miles east of Yuma, crossing the Gila River enroute. Here waters will be lifted to canals at two levels. Two pumping plants further on will relift to still higher levels. The series of parallel canals leading from the pumping plants will serve a compact area lying between the present Yuma project, and the Fortuna Mountains, from Gila River to the Mexican boundary, a small part by gravity, and the balance with varying lift up to 450 feet. Power for the operation of the pumps will eventually be secured from Parker Dam, now under construction for the Metropolitan Water District of Southern California where the United States reserved one-half the power possibility, but initially it is expected to utilize surplus power at Boulder Dam. No unusual engineering problems exist.

COST OF CONSTRUCTION

The cost of the first division of the project is estimated as follows:

Dam, headworks and desilting works	\$1,397,910
Canal system	4,217,612
Pumping plants	4,793,580
Distribution system (139,000 acres)	8,475,862
Transmission line	590,000
Total	19,474,964

This cost would be distributed at the rate of \$134 per acre for the 139,000 acres of mesa lands and at \$74 per acre for the 11,000 acres of north and south Gila lands. The difference in price is due to the fact that no distribution system must be constructed for the north and south Gila lands.

LAND PRICES AND PROBABLE COST OF DEVELOPMENT

The following quotation is taken from the "Report of the Feasibility of Gila Valley Project, Arizona," by a special non-bureau committee comprised of W. H. Code, William Peterson, and W. L. Powers:

The land ownership is largely Federal with a moderate amount of state and some private holdings.

The type of farm which seems best is a general 80 acre seed alfalfa, seed flax, cotton, sorghum, and forage crop with livestock and winter vegetables, or 40 acres with semitropical horticultural enterprises included.

The investment required to bring such farms into full production is estimated from \$6000 to \$12,000.

The crops which can be most successfully grown on Gila Project soils include alfalfa for seed and hay, flax seed, cotton, including the long staple type, winter barley, sorghum, lettuce, honey dew melons, carrots and various winter vegetables. Horticultural crops which succeed are pecans, dates, grapefruit, late winter oranges, limes, tangerines, grapes, and strawberries.

Privately owned lands not already under irrigation will be appraised and holdings in excess of the needs for individual farms would be required to be sold at desert land prices.

FINDING REGARDING FEASIBILITY OF PROJECT

The data herein presented justify the conclusion that the first division of the project is feasible from an engineering and an economic standpoint and I accordingly so find and declare.

ADAPTABILITY OF LAND TO SETTLEMENT AND FARM HOMES

The undeveloped lands of this project are of average fertility for desert lands, but are lacking in humus. They will need special attention over several years to reach full productiveness for the type of crops to which this semi-tropical region is adapted. With proper preparation the lands should produce crops of unusually large value.

With care in the selection of settlers, physically and financially equipped to carry on a proper development program, success in farming may be anticipated.

The demand for irrigated agricultural lands in the southwestern section of this country has always exceeded availability of such lands at reasonable prices.

PROBABLE RETURN TO RECLAMATION FUND OF CONSTRUCTION COST

A finding is required that the cost of construction will probably be returned to the United States. This is interpreted to mean that it will be returned within the maximum period fixed by Reclamation Law, which is 40 years from the time the public notice that the works are completed is issued by the Secretary.

The average annual cost to cover operation and maintenance of the irrigation system and the repayment of the construction cost is estimated at \$8.06 per acre for the undeveloped lands. It is believed that with small initial annual construction charge installments, in order to enable settlers to utilize their resources in bringing their lands to a stage of full production, a repayment ability will be developed that will justify the belief that the cost of the project will be returned. An early beginning of the construction of this project is important to the end that the waters of the Colorado River, made much more usable by the Boulder

Dam, will be placed in use within the United States before an extension of their uses in the Republic of Mexico results in a condition which may make it practically difficult in the future to limit the delivery of water to Mexico to the amounts that may be agreed upon by treaty and to retain for use in the United States an amount suitable for proper agricultural development.

Based upon the foregoing I find that the project is feasible, that the lands watered thereby are adaptable for actual settlement and farm homes, that the lands are in need of a water supply and that the project will probably return the cost thereof to the United States.

I recommend that the project, now in process of construction, be approved, and that authority be given to this Department to proceed with the work and to make contracts and take any necessary action to construct and complete the project.

Sincerely yours,

(Signed) CHARLES WEST,
Acting Secretary of the Interior.

Approved June 21, 1937.

(Signed) FRANKLIN D. ROOSEVELT,
President.

RELOCATE BOUNDARIES OF GILA PROJECT

An act to relocate the boundaries and reduce the area of the Gila Federal reclamation project, and for other purposes. (Act of July 30, 1947, 61 Stat. 628, Public Law 272, 80th Cong., 1st sess.)

* * * That for the purpose of reclaiming and irrigating lands in the State of Arizona and other beneficial uses, the reclamation project known as Gila project, heretofore authorized and established under the provisions of the reclamation laws, the Act of June 16, 1933 (48 Stat. 195), and various appropriation Acts, is hereby reduced in area to approximately forty thousand irrigable acres of land (twenty-five thousand acres thereof situated on the Yuma Mesa and fifteen thousand acres thereof within the North and South Gila Valleys), or such number of acres as can be adequately irrigated by the beneficial consumptive use of no more than three hundred thousand acre-feet of water per annum diverted from the Colorado River, and as thus reduced is hereby reauthorized and redesignated the Yuma Mesa division, Gila project, and the Wellton-Mohawk division, Gila project, comprising approximately seventy-five thousand irrigable acres of land, or such number of acres as can be adequately irrigated by the beneficial consumptive use of no more than three hundred thousand acre-feet of water per annum diverted from the Colorado River, situate within the Wellton, Dome, Roll, Texas Hill, and Mohawk areas, is substituted for the land eliminated from the

Yuma Mesa division and is hereby authorized: *Provided, however,* That the waters to be diverted and used thereby, and the lands and structures for the diversion, transportation, delivery, and storage thereof, shall be subject to the provisions of the Boulder Canyon Project Act of December 21, 1928, and subject to the provisions of the Colorado River compact signed at Santa Fe, New Mexico, November 24, 1922; *And provided further,* That the above limitations contained in this section are for the sole purpose of fixing the maximum acreage of the project and shall not be construed as interpreting, affecting, or modifying any interstate compact or contract with the United States for the use of Colorado River water or any Federal or State statute limiting or defining the right to use Colorado River water of or in any State.

SEC. 2. The Secretary is hereby authorized to acquire in the name of the United States, at prices satisfactory to him, such lands, interests in lands, water rights, and other property within or adjacent to the Gila project, which belongs to the Gila Valley Power District or the Mohawk Municipal Water Conservation District, as he deems appropriate for the protection, development, or improvement of said project: *Provided, however,* That the prices to be paid for the lands owned by the Gila Valley Power District, of Arizona, and heretofore officially appraised at the direction of the Commissioner of Reclamation, for the existing facilities of said district and of the Mohawk Municipal Water Conservation District, of Arizona, heretofore officially appraised at his request and determined by him to be useful to said project, shall not, in the aggregate, exceed \$380,000, and no portion thereof shall be paid until said districts have made arrangements satisfactory to the Secretary for the liquidation of their respective bonded, warrant, and other outstanding indebtedness.

SEC. 3. The Secretary is hereby authorized, to the extent, in the manner, and on such terms as he deems appropriate for the protection, development, or improvement of the Gila project, to sell, exchange, or otherwise dispose of the public lands of the United States within said project, the lands acquired under this Act, and any improvements on any such lands and to lease the same during the presettlement period only, provided such lands shall be disposed of to actual settlers and farmers as soon as practicable; to establish town sites on such lands; and to dedicate portions of such lands for public purposes. Contracts for the sale of such lands shall be on a basis that, in the Secretary's judgment, will provide the return in a reasonable period of years of not less than the appraised value of the land and the improvements thereon or thereto. Such lands may be disposed of in farm units of such sizes as the Secretary determines to be adequate, taking into consideration the character of soil, topography, location with respect to the irrigation system, and such other factors as the Secretary deems relevant: *Provided,* That the area disposed of to an individual shall, so far as practicable, not exceed one hundred and sixty acres. Sales to any individual shall be of not more than one farm unit. Any sums received by the United States from the disposition of

said lands and improvements shall be covered into the reclamation fund, and credited to construction costs.

SEC. 4. Beginning at such date or dates and subject to such provisions and limitations as may be fixed or provided by regulations which the Secretary is hereby authorized to issue, any public lands within the Gila project and any lands acquired under this Act shall be, after disposition thereof by the United States by contract of sale and during the time such contract shall remain in effect, (I) subject to the provisions of the laws of the State of Arizona relating to the organization, government, and regulation of irrigation, electrical power, and other similar districts, and (II) subject to legal assessment or taxation by any such district and by said State or political subdivisions thereof, and to liens for such assessments and taxes and to all proceedings for the enforcement thereof, in the same manner and to the same extent as privately owned lands: *Provided, however,* That the United States does not assume any obligation for amounts so assessed or taxed: *And provided further,* That any proceedings to enforce said assessments or taxes shall be subject to any title then remaining in the United States, to any prior lien reserved to the United States for unpaid installments under land-sale contracts made under this Act, and to any obligation for any other charges, accrued or unaccrued, for special improvements, construction, or operation and maintenance costs of said project.

SEC. 5. Notwithstanding any other provision of law, the general repayment obligation of any organization which may hereafter enter into a contract with the United States covering the repayment of any portion of the costs of construction of the Gila project may be spread in annual installments over such reasonable period, not exceeding sixty years, as the Secretary may determine. For the purpose of predicated the repayment obligations of the various lands within said project on their respective ability, as determined by the Secretary, to share the burdens thereof, he may provide for the equitable apportionment of said general repayment obligation to the lands benefited on a unit basis in accordance with the extent of the benefit derived from the project, the character of soil, topography, and such other factors as he deems relevant, and he may provide for a system of variable payments under which larger annual payments will be required during periods of above-normal production or income and lesser annual payments will be required during periods of subnormal production or income.

SEC. 6. There are hereby authorized to be appropriated, from time to time, out of any money in the Treasury not otherwise appropriated, such moneys as may be necessary to carry out the provisions of this Act.

SEC. 7. The Secretary is authorized to perform such acts, to make such rules and regulations, and to include in contracts made under the authority of this Act such provisions as he deems proper for carrying out the provisions of this Act; and in connection with sales or exchanges under this Act, he is authorized to effect conveyances without regard to the laws governing the patenting of

public lands. Wherever in this Act functions, powers, or duties are conferred upon the Secretary, said functions, powers, or duties may be performed, exercised, or discharged by his duly authorized representatives.

SEC. 8. This Act shall be deemed a supplement to and part of the reclamation law. Nothing in this Act shall be construed to amend the Boulder Canyon Project Act of December 21, 1928, as amended by the Boulder Canyon Project Adjustment Act of July 19, 1940.

DRAINAGE CONSTRUCTION AND REPAYMENT CONTRACT

An act to authorize the Secretary of the Interior to execute a repayment contract with the Yuma Mesa Irrigation and Drainage District, Gila project, Arizona, and for other purposes. (Act of January 28, 1956, 70 Stat. 5, Public Law 394, 84th Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Interior is authorized to execute a contract with the Yuma Mesa Irrigation and Drainage District, Gila project, Arizona, on such terms and conditions as the Secretary deems appropriate, which shall provide, among other things, for repayment by the District to the United States over a period of not exceeding sixty years from the end of the development period for each irrigation block established by the Secretary for lands situate within said district of (1) an average of \$200 per acre for lands in said district for which irrigation facilities have been constructed, to be allocated as determined to be appropriate by the Secretary among the twelve thousand twenty-three and six-tenths acres of class 2 lands and the seven thousand nine hundred forty-six and four-tenths acres of class 3 lands in the district, as classified in the Bureau of Reclamation report titled "Land Classification Report, Unit One, Yuma Mesa Division, Gila Project, Arizona, May 1949", as amended, made pursuant to subsection (d) of section 4 of the Act of December 5, 1924 (43 Stat. 702, 43 U. S. C. 462); (2) the unpaid operation and maintenance charges which accrued prior to June 30, 1954, totaling \$297,167.45, as allocated by the Secretary to said lands situate within the district; and (3) the costs of the works authorized in section 2 hereof, not exceeding \$1,350,000, and further providing for the release, on such terms and conditions as the Secretary finds appropriate, of the existing predevelopment contracts and mortgages held by the United States on the lands situate within the district which were predeveloped by the United States, and for the repayment to the United States by the lands benefited by said predevelopment of the amounts provided for in said mortgages in the same period

within which the costs for the construction of the irrigation facilities are to be repaid.

SEC. 2. The Secretary is authorized on such terms and conditions as he deems appropriate to make drainage surveys and investigations of the lands within the district, to construct drainage facilities and works therefor, to install additional pump capacity in the Yuma Mesa Pump Plant of not to exceed two hundred and seventy-five cubic feet per second, to construct such buildings determined by him to be appropriate in connection with the operation and maintenance of the lands situate within the district, and to provide in the contract referred to in section 1 hereof for the performance of such work.

SEC. 3. Expenditures by the United States in excess of the amounts to be repaid by the district as provided in section 1 hereof, which have been allocated by the Secretary (a) to acreage eliminated from the Gila project pursuant to the Act of July 30, 1947 (61 Stat. 628), (b) to dust control on the Yuma Mesa Division, Gila project, (c) to that portion of predevelopment costs not heretofore covered by contracts and mortgages covering predevelopment charges on lands situate within the district, and (d) other costs allocated by the Secretary to the lands situate within the district not otherwise covered by the repayment obligation in section 1 hereof to be assumed by the district or not otherwise allocated by the Secretary to other contracting entities and which are not assumed or are not to be assumed by them, shall be non-reimbursable: *Provided*, That all revenues from the disposal of public lands within the district (which disposition is hereby authorized on terms and conditions satisfactory to the Secretary) or from special water service contracts other than those which the Secretary determines are allocable to operation and maintenance costs of the district shall be retained by the United States.

SEC. 4. The authority granted in section 1 of this Act to execute said contract shall terminate on December 31, 1957.

SEC. 5. This Act is declared to be a part of Federal reclamation laws as they are defined in the Reclamation Project Act of 1939 (53 Stat. 1187).

GRAND VALLEY PROJECT

COLORADO

The Grand Valley project was examined and reported upon by a Board of Army Engineers in accordance with the act of June 25, 1910 (36 Stat. 835), and approved by the President on January 5, 1911.

UNITED STATES RECLAMATION SERVICE,
Grand Junction, Colo., December 15, 1908.

The DIRECTOR, UNITED STATES RECLAMATION SERVICE.

SIR: There is submitted herewith the report of the Project Engineer upon the Grand Valley Project. There is submitted herein the comment of the Project Board with such recommendations as the situation demands at this time. The report of the Project Engineer is accompanied by maps and drawings necessary to set forth the locations and the design of structures.

It appears from the report of the Project Engineer that the economic location of the High Line Canal westward from the mouth of the canyon of the Grand River is confined by the controlling topographic conditions within quite narrow limits. If the canal be lowered materially, a large area of very valuable land must be watered, if at all, by auxiliary pumping plants for which at the present time there is no certain or cheap permanent supply of power. If the canal be raised materially, it must be extended up the Grand River at prohibitive cost. The line, as at present located, takes advantage in a general way of such opportunities as are presented for cheap construction and has but one seriously objectionable feature, namely, it passes for about eight miles through orchard lands in the vicinity of Palisade and will cut a strip therefrom about 130 feet in width. This land has a present market value ranging from \$300 to \$2,500 per acre. This tract is a portion of the most valuable land in Colorado. It is divided into small holdings and is practically all set to fruit, varying in age from one year to five years. A very few tracts are unimproved. The statutory reservation of right of way for Government canals applies to practically the entire area so that com-

pensation for damage must be based upon improvements. There are complications on account of interference with the Rio Grande Junction Railway and there will be some difficulty in the preparation of satisfactory agreements with The Cameo Coal Company, The Colorado Supply Company and the Irrigation Districts at Palisade.

The recommendations of the Board are as follows:

1. It is recommended that the Secretary of the Interior sign the proper contract with the Water Users Association for the construction of the project by such methods and at such a rate as the available funds and the controlling circumstances justify.

2. It is recommended that the location of the High Line Canal as shown upon the maps accompanying this report be accepted from the upper end of Tunnel No. 3 (Stat. —) to the present terminus (Stat. —).

3. It is recommended that the Project Engineer be instructed to proceed with the work of construction as soon as the funds for the year 1909 are available. On account of the limited appropriation, it is recommended that work be carried on by force account and by contract under the cooperative plan. It is suggested that the work by force account be confined to Tunnel No. 3, and that co-operative work be carried on by customary methods upon those portions of the canal convenient to the residence sections of those water users who are willing to undertake it.

Inasmuch as the controlling conditions will require the canal to occupy approximately the location designated, the grades as fixed may be assumed as the proper ones, subject to such minor modifications as future detail studies may dictate.

4. It is recommended that the local officers be instructed to conduct negotiations continuously upon the adjustments indicated below until the agreements required are secured. We advise that construction operations be held in abeyance as far as can be done without serious delay to the work until the negotiations reach a satisfactory stage.

(a) In the matter of right of way across orchard lands in the Palisade District, the Water Users have been advised that they must reach an amicable agreement with the landowners damaged and submit a recommendation to the Reclamation Service as to the proper settlement. The local officers will keep in close touch with these committees and in case the negotiations do not reach a satisfactory conclusion by March 1, 1909, it is recommended that the Reclamation Service institute the proper legal steps for condemnation.

(b) In the matter of the transfer of the water rights of the Irrigation Districts at Palisade, the two municipal corporations involved have, through their Boards of Directors signified in a general way their acceptance of the terms offered by the Reclamation Service officials and will proceed to hold elections to ratify contracts as soon as the contracts can be prepared. This is as far as these matters can be carried at the present time and the situation is in a satisfactory condition.

(c) In the matter of interference with the railroad, the situ-

ation is somewhat indefinite on account of the uncertainty as to the plans for the upper three miles of the High Line Canal. The general managers of the railroads concerned have signified their willingness to recommend to their executive officials the acceptance of the plan presented herewith upon presentation of the proper contracts. Any future change of plan will lessen the interference, consequently, the railroad companies are not likely to offer serious objections.

(d) Certain interference with companies who own coal lands along the line of the canal are cared for by the reservation of right of way for government canals in the patents.

(e) The Orchard Mesa District is not proceeding in such manner as to indicate plainly how they intend to handle the situation at their headworks. As their requirements are practically identical with those of the Reclamation Service, it is recommended that plans for the upper three miles of the High Line be withheld from public knowledge for two years or more, or until it becomes necessary to begin the construction of that portion of the canal.

5. It is recommended that Smith Brothers who own land on the south side of the Grand River be allowed to purchase water under the terms of the Reclamation Act for their lands, upon release of the power rights now held by them in the Grand River to the Reclamation Service. It is recommended that the price to be paid by them be fixed at the cost of delivering their water at the point of diversion from the High Line Canal and that they be required to furnish the necessary siphons and ditches for the conveyance of the water from the High Line Canal to their lands. It is recommended that public announcement of this policy be withheld.

6. It is recommended that land owners or entrymen whose lands lie above the High Line Canal be permitted to purchase water rights under the terms of the Reclamation Act. They should be charged the regular price for building and for operation and maintenance, in addition to which they should pay the cost of installing pumps, force mains and other structures appurtenant to pumping plants. They should also pay for all power used and for the operation and maintenance of the pumping plants.

7. A peculiar condition exists upon the lands of this project. Large areas settle from a few inches to two feet after irrigation. It is recommended that structures built upon these unstable lands be constructed of the cheapest possible material until such time as the foundations settle to a stable condition. All structures built upon stable foundations should be permanent in character.

8. The type of diversion dam and the final location of the first three miles of the canal should not be settled until the time approaches for their construction. It is recommended that information of a definite character concerning these structures be withheld from the public.

9. It is recommended that drainage problems be left for settlement by communities which are threatened by seepage. At the present time the problem cannot be discussed as it has not developed sufficiently to permit intelligent analysis.

10. It is recommended that the laterals be constructed to each eighty acre tract upon private lands and to each farm unit upon public lands of forty acres or more as laid out upon the farm unit plats for the project. It is recommended that proper devices be installed for the measurement of water to each user.

11. The Board has examined the alternate locations submitted by the Project Engineer and believes the location from the head of Tunnel No. 3 westward as shown upon maps submitted is the most feasible line. It is requested that the following studies be prepared.

(a) A series of plans for a diversion dam showing the adaptability of types of movable dams heretofore used, also any modifications or improvements of existing types which may be practicable. It is believed that the conditions will require a practically clear channel at extreme flood with provision for raising low water level to the canal surface level and for the diversion of practically the entire stream flow at low water. The clear waterway between piers should not be less than fifty feet.

(b) A number of studies should be prepared showing all possible alternates for the first three miles of the canal. Special reference is had to the following alternates.

I. Diversion at Beaver Tail Tunnel Canal all on right hand bank.

II. Diversion at Beaver Tail Tunnel on left hand bank, crossing at Cameo.

III. Diversion at Beaver Tail Tunnel on left hand bank, crossing at Plateau Creek.

IV. Soundings for bed rock from Beaver Tail Tunnel to Plateau Creek.

12. From estimates now available, it is believed that the cost will not be less than \$50.00 nor more than \$75.00 per acre for the land which can be supplied by gravity. The lands are amply able to pay such charges.

13. It is recommended that farm unit plats be prepared at an early date in order that present entrymen may conform thereto and that all public lands be withdrawn from all forms of entry until the water is ready for delivery.

In compliance with the request of the Chief Engineer addressed by letter of December 2nd to the members of the Board especial study has been given the possibility of raising the canal to an elevation which will avoid serious damage to the orchards in the Palisade District.

It appears that a raise of 35 feet will be necessary to avoid damage. This increased elevation will bring about 2,000 acres under cultivation in addition to that covered by the present canal. To gain the additional elevation by gravity canal will require the extension of the proposed line up the Grand River for a distance of three and a half to four miles at an expense of about one million dollars. Such a change not only adds three and a half to four miles of heavy work, but it also raises the entire lower end of the canyon line above supporting flats along the river and throws it upon very steep side hill and talus slopes. The change would probably

necessitate the construction of a large portion of the line in tunnel.

As a possible alternate a pumping plant located at Palisade was considered. On account of the proximity of large coal areas, it was assumed that steam pumping machinery would be cheaper than any other method.

* * * * *

For 60,000 acres this makes a credit of \$28.40 per acre.

Acreage cost of pumping plant	\$115.00
Acreage credit for pumping plant	28.40
Net capitalized cost	86.60

This shows a balance of \$11.60 per acre in favor of the gravity plan as recommended which proposes adequate compensation for damages to fruit land.

Respectfully submitted.

(Signed) W. H. SANDERS,
Consulting Engineer.
 J. H. QUINTON,
Consulting Engineer.
 WM. GERIG,
Consulting Engineer.
 I. W. McCONNELL,
Supervising Engineer.
 E. E. SANDS,
Project Engineer.

DEPARTMENT OF THE INTERIOR,
 UNITED STATES RECLAMATION SERVICE,
 Washington, D. C., February 20, 1909.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: There has been an informal understanding with the people of the Grand Valley in Colorado that if they would cooperate with the Service, the construction of the Grand Valley project would be taken up immediately. The Water Users' Association has submitted a showing, from which it appears that subscriptions for cooperative work have been made to an amount of over \$90,000 in money and about \$40,000 in work, or, in all, a little over \$130,000. They have requested an allotment of \$125,000 for use during the year 1909.

The proposed allotment together with the allotment heretofore made for this project will provide for a total sum available to

December 31, 1909, of \$225,000; and this amount with the subscription available from the Water Users' Association will make a total available on the project to that date of \$350,000.

In pursuance of the understanding referred to, a contract is submitted herewith, executed on behalf of the Grand Valley Water Users' Association, providing for the proposed cooperation and for the allotment of \$125,000 for work in 1909.

The agreement was drawn and executed in 1908, and in section 1 thereof there is a provision that the proposed allotment shall be available during the remainder of 1908 and during the calendar year of 1909. As the agreement will be dated in 1909, however, the reference to last year may be treated as surplusage and will not impair the validity of the provision for expenditure of the allotment in 1909.

It is respectfully recommended that the two copies of the agreement submitted herewith be signed and returned to this office; and that the allotment of \$125,000 for 1909 be approved.

Very respectfully,

(Signed) F.H. NEWELL,
Director.

Contract and allotment approved and all papers returned to the Reclamation Service February 20, 1909.

(Signed) R. A. BALLINGER,
Secretary.

UNITED STATES RECLAMATION SERVICE,
September 21, 1912.

The SECRETARY OF THE INTERIOR.

SIR: Herewith is copy of a letter from the Grand Valley Water Users' Association by D. W. Aupperle, Secretary, under date of September 20, submitting documents in regard to the amendment of the Articles of Incorporation providing for equitable payments instead of equal payments in the matter of construction cost, maintenance and operation expenses. These papers have been duly filed as required by the State law for the amendment of Articles of Incorporation.

The meeting of the Association was held on September 14, and adjourned after the completion of business at 1:30. At about 4:30 on the afternoon of September 14, the project engineer at Grand Junction received telegraphic information from this office regarding Departmental letter of September 12, giving instructions for the amendment of the Articles of Incorporation in a number of important particulars. The Secretary's letter of September 12 to the Association was received by the Association on September 16.

At a special meeting of the Board of Directors of the Association, called on September 16, a resolution was adopted, of which copy is enclosed, reciting the fact that the special meeting of the stockholders to pass upon the amendment of the Articles of Incorporation had closed before the Association had any knowledge that additional requirements had been made by the Department. The resolution asks that the further amending of the Articles of Incorporation be waived at this time, and resolved also that the matter of making the amendments desired by the Department shall be submitted to the shareholders at the annual meeting of the Association in January, 1913.

The Association desires that in the meanwhile the Department execute the proposed contract with the Association now pending in the Department, and concerning which the Department in a letter of August 10 addressed to Mr. Aupperle stated, "The contract appears in itself to be suitable, and it is the intention of the Department to execute this as soon as your association has made the changes which a careful examination now being made by the Department may appear to require."

As stated in the Association's letter of September 20 in the absence of any further instructions from the Department since August 10, the Association assumed that no other changes were required in its Articles of Incorporation than the one referred to in Departmental letter of August 10, to the effect that the Articles should provide for equitable payments instead of equal payments.

It is the belief of this office that there is no doubt of the adoption of the desired amendments at the meeting of the Association next January, and that under the circumstances, the Association having acted according to the instructions of the Department available at the time, the making of these amendments at the present time may be waived.

The interests of the United States it is believed will not be jeopardized in the slightest degree, as the Association has everything to lose by failing to carry out the Departmental instructions, and as a matter of fact the present shareholders of the Association will not be materially affected by the proposed amendments.

RECOMMENDATIONS

1. That the pending contract with the Association be executed by the Secretary, and that this office be authorized to notify the Association that the adoption of these amendments at this time will be waived, and that it is expected that they will be submitted to the shareholders at the annual meeting January 14, 1913.

2. That this office be authorized to begin construction according to the plan outlined in office letter of February 27, 1912, as all the necessary preliminaries will have been complied with when the Department approves the waiver of present further action in regard to the amendment of the Articles of Incorporation. The approval of this recommendation will authorize work by Government forces upon one of the smaller tunnels where satisfactory

showing of title has been made such work to be carried on in accordance with plans developed by a Board of Engineers to be convened at an early date.

Respectfully,

(Signed) A. P. DAVIS,
Acting Director.

OFFICE OF THE SECRETARY,
Washington, September 23, 1912.

The DIRECTOR OF THE RECLAMATION SERVICE.

SIR: I have your letter of September 21, 1912, recommending the approval of pending contract with the Grand Valley Water Users Association, relating to the construction of the Grand Valley Reclamation Project, Colorado, and the authorization of your office to begin construction of the work according to the plan outlined in letter of February 27, 1912. The amendments to articles of incorporation and by-laws required to be made by letter of the Department addressed to the Grand Valley Water Users Association September 12, 1912, have not been made, as the letter was not received by the association until after its meeting of September 14 had adjourned. The directors of the association have stated in writing that they will submit the proposed amendment to the association at its next regular annual meeting beginning on the second Tuesday in January, 1913, and the secretary of the association personally assures me that the influence of the entire board of directors will be exercised toward securing the adoption of the required amendments.

I have therefore this day approved the contract, upon the express condition that the United States shall not be bound thereby unless the required amendments are made at the January meeting or prior thereto. In the meantime you are authorized to begin construction, according to the plan outlined in letter of February 27, 1912, upon one of the smaller tunnels, where satisfactory showing of title has been made.

Very respectfully,

(Signed) SAMUEL ADAMS,
Acting Secretary.

GRANTS PASS PROJECT

OREGON

Provisions of the Interior Department Appropriation Act, 1950, (October 12, 1949, 63 Stat. 765), in effect, authorized the Grants Pass project, originally a part of the Deschutes project. Savage Rapids Dam was, in effect, authorized by the Interior Department Appropriation Act, 1953 (July 9, 1952, 66 Stat. 445).

Funds were provided for the construction of fish protective facilities at Savage Rapids Dam by the Public Works Appropriation Act, 1957 (Act of July 2, 1956, 70 Stat. 474, 476, Public Law 641, 84th Cong., 2d sess.).

NORTHWEST UNIT PIPELINE

[Extract from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1950, and for other purposes. (Act of October 12, 1949, 63 Stat. 765, 779, 780, Public Law 350, 81st Cong., 1st sess.)

* * * * *

Construction: For construction and continuation of construction of the following projects in not to exceed the following amounts, all to be reimbursable (except as otherwise provided by law) under the reclamation law, to remain available until expended for carrying out projects (including the construction of transmission lines) previously or herein authorized by Congress: * * * and not to exceed \$100,000 shall be available for emergency reconstruction of the Northwest Unit pipe line of the Grants Pass Irrigation District; * * *

SAVAGE RAPIDS DAM

[Extract from] An act making appropriations for Department of the Interior for fiscal year ending June 30, 1953, and for other purposes. (Act of July 9, 1952, 66 Stat. 445, 450, 451, Public Law 470, 82nd Cong., 2d sess.)

* * * That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, for the Department of the Interior for the fiscal year ending June 30, 1953, namely:

For carrying out the functions of the Bureau of Reclamation as provided in the Federal reclamation laws (act of June 17, 1902, 32 Stat. 388, and acts amendatory thereof or supplementary thereto) and other acts applicable to that Bureau, as follows:

* * * * *

Construction and Rehabilitation * * * *Provided further, That* not to exceed \$700,000 shall be available toward emergency rehabilitation of the Savage Rapids Dam to be repaid in full under conditions satisfactory to the Secretary of the Interior: * * *

[Extract from] An act making appropriations for the Tennessee Valley Authority, certain agencies of the Department of the Interior, and civil functions administered by the Department of the Army, for the fiscal year ending June 30, 1957, and for other purposes. (Act of July 2, 1956, 70 Stat. 476, Public Law 641, 84th Cong., 2d sess., H. R. 11319.)

* * * * *

Construction and Rehabilitation * * * *Provided further, That* not to exceed \$208,000 of this appropriation shall be available for the construction of fish protective facilities at Savage Rapids Dam, Oregon, to be nonreimbursable and nonreturnable. * * *

HONDO PROJECT

NEW MEXICO

The Hondo project was authorized by the Secretary on November 10, 1903, under the Reclamation Act of 1902; examined and reported upon by a Board of Army Engineers and approved by the President on January 5, 1911, in accordance with the act of June 25, 1910 (36 Stat. 835). The project was unsuccessful, and in 1924 the Committee of Special Advisers (Fact Finders Committee) recommended that the project be appraised and sold.

UNITED STATES GEOLOGICAL SURVEY,
HYDROGRAPHIC BRANCH,
Washington, November 2, 1903.

Honorable CHAS. D. WALCOTT,
Director.

SIR: Preliminary examinations in New Mexico have advanced to the point where it is now possible to recommend construction of a definite project and at the same time continue work on others.

Reports have been received from Mr. Arthur P. Davis, Supervising Engineer, and from Messrs. Geo. Y. Wisner and J. H. Quinton, Consulting Engineers, recommending that of the various projects examined, construction be begun on that known as the Hondo Reservoir, provided that rights of way can be secured and necessary arrangements made with the landowners possessing needed lands and rights.

Briefly stated, the lands under the Hondo project which can be irrigated to advantage, have an extent of from 12,000 to 15,000 acres. The estimated cost of construction and bringing the water to the arid land is in round numbers \$240,000, or \$20 per acre for a minimum acreage of 12,000. It is believed, however, that more than 12,000 acres can be served.

The land which can be irrigated most easily from the reservoir is mainly in the hands of private parties. These are of two classes, those who have settled or made claims prior to the reservation of the land and second, those who have made home-

stead entries under the terms of the Law of June 17, 1902. Probably all of the land has been taken up in one form or another so that there is no question as to colonization.

The land is all first class, level and free from alkali and will be worth ultimately at least \$100 per acre when planted to alfalfa or corn, and if used for fruit may have a far higher value.

The works contemplated consist of the enlarging of a natural reservoir and the providing of an inlet and outlet canal, involving no engineering difficulties.

Further facts are contained in copies of the accompanying documents as follows:

Extract from letter of J. H. Quinton, dated October 1, 1903.

Extract from letter of Geo. Y. Wisner, Consulting Engineer, dated October 6, 1903.

Extract from joint report by Messrs. Davis, Wisner, and Quinton dated October 22, 1903.

In view of the statements from these engineers who have been convened to act as a board to pass upon the matter, I respectfully make the following recommendations.

RECOMMENDATIONS

It is recommended that the approval of the Secretary of the Interior be secured for taking up this project and pushing it forward to early completion, provided satisfactory arrangements can be made regarding titles.

Second, that the Chief Engineer of the Reclamation Service be authorized to investigate the land titles, secure options, and make definite arrangements for purchase of necessary lands and rights, such arrangements to be subject to final approval by the Secretary.

Third, that the Chief Engineer be authorized to organize or cause to be organized into an association, the people owning lands which may be served by these works, as required by Section 6 of the Act of June 17, 1902; said form of organization following in general lines the Articles of Incorporation of the Salt River Valley, Arizona, Water-Users' Association.

Fourth, that the Chief Engineer be authorized to have prepared detailed plans and specifications for the constructions of the works, advertisements for bids to be inserted in the usual form under departmental supervision, the bids to be received in accordance with law; and recommendation made to the Secretary for acceptance.

Fifth, that the Chief Engineer be authorized to perform other necessary acts and execute minor works by days labor in the customary manner, such as drilling for foundations, uncovering the same, erecting temporary structures and minor works not covered by the usual contracts.

Very respectfully,

(Signed) F. H. NEWELL,
Chief Engineer.

UNITED STATES GEOLOGICAL SURVEY,
November 3, 1903.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: I have the honor to transmit herewith with my approval, the accompanying letter from Mr. F. H. Newell, Chief Engineer, and related documents.

I have not examined this locality personally, but from such knowledge as I possess, I believe that construction here should be taken up and pushed forward promptly.

Very respectfully,

(Signed) CHAS. D. WALCOTT,
Director.

OFFICE OF THE SECRETARY,
Washington, November 10, 1903.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: Under cover of a letter of the 3rd instant to the Department you submitted with your approval a report, with related papers, from Mr. F. H. Newell, Chief Engineer, relative to the Hondo Project, New Mexico, under the act of June 17, 1902—32 Stat. 388.

Mr. Newell has stated that the lands which can be advantageously irrigated under this project have an extent of from 12,000 to 15,000 acres and that the cost of construction and delivering the water to the arid land is estimated in round numbers at \$240,000. He has also recommended as follows:

First: That Departmental approval be secured for taking up the project and carrying it forward to early completion, if satisfactory arrangements can be made regarding titles.

Second: That the Chief Engineer of the Reclamation Service be authorized to investigate the land titles, secure options, and make definite arrangements for purchase of necessary lands and rights, such arrangements to be subject to final approval by the Secretary.

Third: That the Chief Engineer be authorized to organize or cause to be organized into an association, the people owning lands which may be served by these works, as required by Section 6 of the act of June 17, 1902; said form of organization following in

general lines the articles of incorporation of the Salt River Valley, Arizona, Water-Users' Association.

Fourth: That the Chief Engineer be authorized to have prepared detailed plans and specifications for the construction of the works, advertisement for bids to be inserted in the usual form under Departmental supervision; the bids to be received in accordance with law; and recommendation made to the Secretary for acceptance.

Fifth: That the Chief Engineer be authorized to perform other necessary acts and execute minor works by days labor in the customary manner, such as drilling for foundations, uncovering the same, erecting temporary structures and minor works not covered by the usual contracts.

I have considered the recommendations and in view of your approval thereof and of your expressed opinion that construction under this project should be taken up and pushed forward promptly, the recommendations are hereby approved and authority to take such further action as is necessary to carry them into effect is hereby granted.

I have endorsed my approval on the report of Mr. Newell which, with the accompanying papers, is enclosed. A copy of the report has been retained for the files of the Department.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

HUMBOLDT PROJECT

NEVADA

The Humboldt project ¹ was found feasible by the Secretary on November 1, 1935, and approved by the President on November 6, 1935, in accordance with section 4 of the act of June 25, 1910 (36 Stat. 835), and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702).

OFFICE OF THE SECRETARY,
Washington, November 1, 1935.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The Supreme Court of the United States in the Parker Dam decision (*United States v. State of Arizona*, 295 U. S. 174) indicated that Section 4 of the Act of June 25, 1910 (36 Stat., 835) is applicable to irrigation projects constructed under the National Industrial Recovery Act, and this report upon the Humboldt project, Nevada, is made to you under said statute of 1910 and under subsection B of Section 4 of the Act of December 5, 1924 (43 Stat., 701).

Section 4 of the Act of June 25, 1910, provides, in effect, that after the date of that act no irrigation project to be constructed under the Act of June 17, 1902 (32 Stat., 388), and acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924 (43 Stat., 701) provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

¹ The Humboldt Project was initiated under the provisions of the National Industrial Recovery Act of 1933.

Under date of August 24, 1933, the Federal Emergency Administrator of Public Works approved an allotment of \$2,000,000 for the construction of the Humboldt project, Nevada. This is a part of the appropriation of \$3,300,000 made in the Fourth Deficiency Act, Fiscal Year 1933, approved June 16, 1933, 48 Stat., 275, to carry out the purposes of the National Industrial Recovery Act of June 16, 1933, 48 Stat., 195. The allocation of \$2,000,000 became available September 6, 1933, and to date about \$600,000 has been spent on the project and \$300,000 addition obligated.

The supplemental water to be developed by the project will be used for irrigation on some 30,000 acres of patented land near Lovelock, Nevada, embraced in the Pershing County Water Conservation District of Nevada, which District has entered into a contract with the United States dated October 1, 1934, to repay the cost of the project over a term of 40 years without interest.

The furnishing of an additional water supply for the project will be accomplished by the construction of the Rye Patch Reservoir on the Humboldt River near Rye Patch, Nevada, with a storage capacity of 179,000 acre feet of water and the acquisition and transfer of old up-stream water rights from the lands upon which used down the Humboldt River for storage in said Rye Patch Reservoir and use on the lands within the District.

The construction of said reservoir and the purchase of water rights as contemplated by the repayment contract will provide additional water urgently needed for the irrigation of the lands in the Pershing County Water Conservation District of Nevada.

Studies and investigations made by the Bureau of Reclamation indicate that the water supply is adequate for the purpose intended, that the construction of the dam and the acquisition and transfer of the water rights are feasible from an engineering standpoint and that the dam can be constructed and the water rights acquired within the allotment.

I find that the project is feasible, that the land watered thereby is adaptable for actual settlement and farm homes, that the lands are badly in need of an additional water supply and that the project will probably return the cost thereof to the United States.

I recommend that the project, consisting of the Rye Patch Reservoir and the acquisition of water rights be approved and any steps or action heretofore taken toward the construction of said dam or the purchase of water rights be ratified, and that authority be issued to this Department to proceed with the work and to make contracts and take any necessary action to construct and complete the project.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved November 6, 1935.

(Signed) FRANKLIN D. ROOSEVELT,
President.

HUNGRY HORSE PROJECT

MONTANA

The Hungry Horse project was authorized by the act of June 5, 1944 (58 Stat. 270).

An act to provide for the partial construction of the Hungry Horse Dam on the South Fork of the Flathead River in the State of Montana, and for other purposes. (Act of June 5, 1944, 58 Stat. 270, Public Law 329, 78th Cong., 2d sess.)

* * * That for the purpose of irrigation and reclamation of arid lands, for controlling floods, improving navigation, regulating the flow of the South Fork of the Flathead River, for the generation of electric energy, and for other beneficial uses primarily in the State of Montana but also in downstream areas, the Secretary of the Interior is authorized and directed to proceed as soon as practicable with the construction, operation, and maintenance of the proposed Hungry Horse Dam (including facilities for generating electric energy) on the South Fork of the Flathead River, Flathead County, Montana, to such a height as may be necessary to impound not less than one million acre-feet of water.

SEC. 2. The Secretary of the Interior is authorized to complete, as soon as the necessary additional material is available, the construction of the Hungry Horse Dam so as to provide a storage reservoir of the maximum usable and feasible capacity.

SEC. 3. The Secretary of the Interior is authorized to construct, operate, and maintain under the provisions of the Federal reclamation laws (act of June 17, 1902, 32 Stat. 388 and acts amendatory thereof or supplementary thereto), such additional works as he may deem necessary for irrigation purposes. Such irrigation works may be undertaken only after a report and findings thereon have been made by the Secretary of the Interior as provided in such Federal reclamation laws; and, within the limits of the water users' repayment ability, such report may be predicated on allocation to irrigation of an appropriate portion of the cost of constructing said dam and reservoir. Said dam and reservoir and said irrigation works may be utilized for irrigation purposes only pursuant to the provisions of said Federal reclamation laws.

SEC. 4. There are authorized to be appropriated such sums as may be necessary to carry out the purposes of this act.

HUNTLEY PROJECT

MONTANA

The Huntley project was authorized by the Secretary on April 18, 1905, under the Reclamation Act of 1902; examined and reported upon by a Board of Army Engineers and approved by the President on January 5, 1911, in accordance with the act of June 25, 1910 (36 Stat. 835).

UNITED STATES GEOLOGICAL SURVEY,
RECLAMATION SERVICE,
Denver, Col., February 26, 1905.

Mr. F. H. NEWELL,
Chief Engineer, U. S. R. S., Washington, D. C.

DEAR SIR: We, the undersigned, have examined and considered the advertisement, proposal, specifications, plans Nos. 1-2-3-4 and profile hereto attached, for the Huntley Project, Montana, and recommend the project be promptly advertised and put under construction, in accordance therewith.

Very truly yours,

(Signed) WILLIAM E. SWIFT,
District Engineer.
H. N. SAVAGE,
Supervising Engineer.
A. J. WILEY,
Consulting Engineer.
J. H. QUINTON,
Consulting Engineer.

UNITED STATES GEOLOGICAL SURVEY,
April 14, 1905.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: I have the honor to acknowledge the receipt of Departmental letter of the 13th inst., transmitting the reports of the Commissioner of the General Land Office and of Indian Affairs upon the proposed Huntley Project, in the ceded Crow Indian Reservation.

From the report of the Commissioner of the General Land Office it appears that contracts have been let for the necessary public land surveys and that they are to be completed by the end of the present year. The Commissioner of Indian Affairs reports that the allotments on the ceded part of the Crow reservation under the proposed project are perhaps completed in the field at the present time. If not, they can be made at a very early date.

In regard to the disposition of the lands allotted to Indians who have since died, and which under the law can be disposed of by their heirs, the Commissioner is of the opinion that the Secretary of the Interior may require a condition in the transfer from the Indian heir to the purchaser that the latter shall make application for a water right under the provisions of the reclamation act, although he questions the efficacy of such a condition.

It is believed that such a condition introduced in the terms of sale and deed issued would accomplish the results desired. If, however, such condition is not binding upon the purchaser, it is believed that there will be but few cases in which objection would be made, because if the land is sold in tracts not exceeding 160 acres to any one person, it can not be utilized to much advantage without water. The main object to be accomplished in making these transfers is to prevent the acquisition of these lands in large blocks.

It appears, therefore, from the reports of the Land Office and the Indian Office that the questions raised regarding the advisability of beginning the project at once have been satisfactorily answered.

It is therefore recommended that appropriate instructions be given to complete the Indian allotments at as early a date as possible, and that prompt report be made thereon by the end of the present year, and also that the Indian Office be instructed to prepare such conditions of sale of the inherited lands as shall incorporate the requirements of the reclamation act.

This office would be pleased to cooperate in the preparation of these conditions, in order that the policy of the Reclamation Service may be carried out as fully as the circumstances will permit.

The project as now outlined contemplates the irrigation of about 35,000 acres of land at an approximate total cost of \$900,000. The project has been approved by the Board of Engineers, and I recommend that the sum of \$900,000 be set apart for the further steps necessary for the completion thereof. The plans and specifications have been reviewed by the Board of Engineers, who have approved them and recommended the immediate construction of the main canal covered by the specifications under consideration.

It is recommended that the specifications, which are herewith returned, be approved by the Department.

Very respectfully,

(Signed) CHAS. D. WALCOTT,
Director.

DEPARTMENT OF THE INTERIOR,
Washington, April 18, 1905.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: I have before me your letter of the 14th instant in which you have reported that the proposed Huntley Project, Montana, as now outlined, contemplates the irrigation of about 35,000 acres of land at an approximate total cost of \$900,000, that the project has been approved by the Board of Engineers and you have recommended that the sum mentioned be set apart toward the completion thereof. You have also enclosed a proposed form of advertisement, proposal and specifications for the construction of 30 miles of main canal of this project on ceded Crow Indian lands, the approval of which you have recommended.

In view of your recommendations I hereby authorize the construction of the Huntley Project and I hereby set aside from the fund provided by the act of June 17, 1902—32 Stat. 388—the sum of \$900,000 for that project. I also hereby approve the form you have submitted except that, in view of the difference of opinion that has arisen between the Comptroller of the Treasury Department and this Department, with respect to concessions of rates from railroad companies, and of the fact that I have asked the Attorney General for an opinion in the matter, I do not think it advisable to retain in the general specifications Paragraph 11, relating to concessions of rates or to ask bidders to make allowance for such concessions. I therefore direct that you eliminate paragraph 11 from the general specifications.

In accordance with your further recommendations I have in a letter of today directed the Commissioner of the General Land Office to cause the survey of this land to be completed and reported on to the Department without delay, and in another letter I have directed the Commissioner of Indian Affairs to cause the allotments to be made and reported on before the expiration of the present year, and to confer with you on the subject of conditions of sale of inherited lands.

The enclosure in your letter is returned herewith.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

HYRUM PROJECT

UTAH

The second division ¹ of the Salt Lake Basin project was found feasible by the Secretary September 9, 1933, and approved by the President on September 18, 1933, under the terms of the Reclamation law. This division has been renamed "Hyrum Project."

The Hyrum project was found feasible by the Secretary on November 1, 1935, and approved by the President on November 6, 1935, in accordance with section 4 of the act of June 25, 1910 (36 Stat. 836) and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702).

SALT LAKE BASIN PROJECT—SECOND DIVISION

OFFICE OF THE SECRETARY,
Washington, September 9, 1933.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: Section 4 of the Act of June 25, 1910 (36 Stat. 835), provides in effect that after the date of that act no irrigation project to be constructed under the act of June 17, 1902 (32 Stat., 388) and acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924 (43 Stat., 701) provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information

¹ The first division (Echo Reservoir, Utah Lake Control, and Weber Provo Canal) has been renamed "Weber River Project."

in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

The following data are submitted with respect to the Second Division of the Salt Lake Basin project of Utah, usually designated the Cache Valley Division, located in the vicinity of Logan, Utah, in the watershed of Bear River.

THE PROJECT

Cache Valley, in northern Utah, is largely irrigated from a number of typical mountain streams rising in the mountains east thereof with water supply for irrigation generally deficient in late summer, although there is much surplus water in the winter and flood season storage has not been provided. Cheap storage sites are not available and the financial resources of the community have not been adequate to the task of storing flood water for later use. The project comprises, in the main, a reservoir on Little Bear River at Hyrum and a canal leading therefrom on the westerly side of the stream to intercept several streams of weak flow from which a number of small canals serve irrigated lands. The storage yield will in the main be used to supplement the inadequate supply for 8,000 acres now irrigated. Incidentally, irrigation will also be provided for 4,000 acres of lands now largely dry-farmed to wheat, which lands will upon irrigation be devoted to crops of less competitive nature and provide opportunities for an increased farm population. A small part of the developed water will be taken by local communities which would otherwise probably encroach on the natural flow to satisfy their growing requirements.

THE WATER SUPPLY

From a study of stream flow records extending over a period of 25 years it has been concluded that the reservoir would fill every year, with surplus waters available in the winter and during the spring floods. Individual requirements for storage vary from one-half to three acre feet per acre, depending on the sufficiency of present supplies, the character of the land and its crop adaptability. Surplus stream flow after filling the reservoir will also be available for direct use where desired. The resulting water supply will be adequate for all lands served.

THE ENGINEERING FEATURES

The reservoir will be formed by an earth fill dam with rock, riprapped face, 90 feet high and 525 feet long at the top. A concrete-lined spillway will cross a nearby saddle in the surrounding hills. A concrete lined tunnel in one abutment, at river level, will

divert the stream during construction and later be provided with a riser at its lower end to serve the canal leaving the dam forty feet above the river. Of the 18,000 acre feet of gross storage capacity, 4,000 acre feet will be useful only to retain inflowing silt and to provide the head for a hydro-pumping plant to serve a small area above the main canal, which by this plan is advantageously located to serve the largest possible area. The main canal has a length of 14 miles and a maximum capacity of 75 second feet. Only the simplest of construction is involved. The dam site has been amply tested by drilling and the geological report is favorable.

COST OF CONSTRUCTION

Reservoir	\$670,000
Canals	262,000
Total	932,000

LAND PRICES AND COST OF DEVELOPMENT

Land values at this time are conjectural. Sales are made only under extreme pressure and the results are not indicative of values. A few years back, improved lands with a fair water supply commanded prices up to \$300 per acre. Where there has been sufficient water to irrigate during the entire growing season, the average holding is less than 40 acres with intensive farming the rule, the small farms being devoted to sugar beets, dairying and the growing of vegetables for table consumption. Such lands are almost entirely owned and operated by residents either on the land or in towns within two or three miles. They are tenaciously held in the family. Over half of the total area is of this character. The balance gradually grades into larger holdings where lack of irrigation water limits agriculture to grain-growing by dry-farming methods, at best a hazardous undertaking. These lands with water will be promptly devoted to the prevailing type of irrigated agriculture when water is available. No land development or settlement problems exist. The small area not already irrigated is settled, improved, farmed, and ready for water.

RETURN OF COST

The United States will contract with a water users' association for the repayment, under the terms of the Reclamation Law, of all cost, without interest, over a period of not to exceed forty years. The association will issue stock to individuals, ditch companies, and one irrigation district in proportion to the amount of water desired and payments will be made pursuant to suitable stock assessments. Security for payment will be obtained by a lien on existing irrigation works and water rights, supplemented where such are of inadequate value, by a lien on land to be incor-

porated in an irrigation district. Individuals desiring to make stock subscriptions under these conditions have evidenced such desire, in writing, as to 90% of the water supply to be made available.

Crop values under normal conditions without allowance for the conversion thereof, on the farm, to dairy, poultry, and livestock products will average at least \$50 per acre.

I find the Second Division of the Salt Lake Basin Project to be feasible, that the Division is adaptable for actual settlement and farm homes and that the cost of the development will in all probability be returned to the United States within the period of forty years.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved September 18, 1933.

(Signed) FRANKLIN D. ROOSEVELT,
President.

HYRUM PROJECT ²

OFFICE OF THE SECRETARY,
Washington, November 1, 1935.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The Supreme Court of the United States in the Parker Dam decision (*United States v. State of Arizona*, 295 U. S. 174) indicated that Section 4 of the Act of June 25, 1910, 36 Stat. 835, is applicable to irrigation project constructed under the National Industrial Recovery Act, and this report upon the Hyrum project, Utah (also called the Cache Valley division of the Salt Lake Basin project), is made to you under said statute of 1910 and under sub-section B of Section 4 of the Act of December 5, 1924 (43 Stat., 701).

Section 4 of the Act of June 25, 1910, provides, in effect, that after the date of that act no irrigation project to be constructed under the act of June 17, 1902 (32 Stat., 388), and acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

² The *Hyrum Project* was initiated under the provisions of the National Industrial Recovery Act of 1933.

Subsection B, Section 4, Act of December 5, 1924 (43 Stat., 701) provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

Under date of August 19, 1933, I approved an allotment of \$930,000 for the construction of the Hyrum project, all of which is still available or has been expended toward the construction of the project.

The water to be developed by the project will be used for the irrigation of privately owned lands already under cultivation in the vicinity of Hyrum, Wellsville, and Mendon, Utah. The major portion of the lands under the project now has a partial water supply from existing irrigation system while the remaining lands are used in the growing of dry farm crops but the lands will be more productive and profitable crops more certain when water is made available from the project works. The dry-farm lands are embraced within the Wellsville-Mendon Conservation District which was organized expressly to participate in the project.

The lands of the project are mainly under canal systems of two existing companies which, with the Wellsville-Mendon Conservation District, have formed the South Cache Water Users' Association, which has entered into a contract with the United States dated October 9, 1933, to repay the cost of the project.

The furnishing of water for the project lands will be accomplished by the construction of the Hyrum Reservoir on the Little Bear River with a total storage capacity of 18,000 acre-feet of water and a live storage capacity of 14,000 acre-feet of water, the construction of the Hyrum-Mendon Canal, with a length of 14 miles, which diverts from the Little Bear River immediately below the reservoir, the construction of the Wellsville Canal, including a pumping plant in connection therewith, which diverts from the Little Bear River also just below the reservoir, with a length of $5\frac{1}{2}$ miles, and the construction of the Hyrum Feeder Canal, approximately one mile in length, which diverts from the outlet works of the Hyrum Reservoir.

Studies and investigations made by the Bureau of Reclamation indicate that the water supply is adequate for the purpose intended, that the construction of the reservoir and canals is feasible from an engineering standpoint, and that the project can be completed within the allotment of \$930,000 which the Association has agreed to repay.

I find that the project is feasible, that the lands watered thereby are adaptable for actual settlement and farm homes, that the lands are in need of a water supply, and that the project will probably return the cost thereof to the United States.

I recommend that the project, consisting of the Hyrum reser-

voir and three canals, and which is now in an advanced stage of completion, be approved, that any steps or action heretofore taken towards the construction of the same be ratified, and that authority be given to this Department to proceed with the work and to make and carry out contracts and take any necessary action to construct and complete the project.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved November 6, 1935.

(Signed) FRANKLIN D. ROOSEVELT,
President.

INTAKE PROJECT

MONTANA

The Intake project was found feasible by the Secretary on October 11, 1943, and approved by the President on January 20, 1944, under the terms of the Water Conservation and Utilization Act of August 11, 1939, as amended. It was reauthorized as part of the Missouri River Basin project under the terms of the Flood Control Act of 1944, but construction proceeded under the original authorization so that the Intake project is not a part of the Missouri River Basin project.

OFFICE OF THE SECRETARY,
Washington, October 11, 1943.

THE PRESIDENT,

The White House.

(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: An investigation has been made of the Intake Pumping project involving the irrigation of 840 acres of land in Dawson County, Montana, and pursuant to the authority of the Act of August 11, 1939 (53 Stat. 1418), as amended (herein called the Act), I submit this report on the proposed project and request your approval of the findings, recommendations, and certifications contained herein.

PROJECT PURPOSE

The primary purpose of the proposed project would be to develop a water supply for 580 acres of new land and to consolidate the number of individual pumping units now pumping water for 260 acres. The area lies along the north bank of the Yellowstone River northeast of the town of Glendive, and its immediate development would provide a means of increasing the production of agricultural products now vitally needed. After the war, it is believed that the project would stabilize the incomes of families

living in the area and would contribute toward the solution of problems arising out of interstate movements of agricultural populations by providing new homes and opportunities for a few additional families.

THE PLAN

Water would be raised to the project area by pumping from the main canal of the existing adjacent Lower Yellowstone project which was built under the Federal Reclamation Law. Structures contemplated for the development would consist of a pumping plant, one siphon, and the usual turnouts, wasteways, small bridges, and similar features. Changes in these general plans may be found necessary, but it is expected that any changes will be of a minor nature and will neither alter the general objectives of the project nor result in material departures from the present findings, predicated on the present plans for the project.

PARTICIPATION OF FEDERAL AGENCIES

The Bureau of Reclamation would construct the pumping plant, canal system, and other necessary and appurtenant structures, and, subject to change, also would operate the system after it is built. The Bureau would negotiate contracts with the water users for the repayment of the reimbursable construction charges.

The War Food Administrator, acting in the stead of the Secretary of Agriculture, has transmitted a letter which is enclosed, indicating his approval of the project and the extent of the proposed participation by the Department of Agriculture. From this letter it will be noted that the War Food Administrator concurs in my belief that the construction would be justifiable as an aid in the production of needed agricultural products.

Services, labor, materials, supplies, equipment, and similar items which may become available through the Selective Service System, Prisoner-of-War Camps, or other Federal Agencies may be utilized under the terms and conditions fixed by such agencies if, in my opinion, such use would effectively expedite construction of the project.

PARTICIPATION OF NON-FEDERAL AGENCIES

Local interests requesting the development of the project indicate that they would form or become part of a suitable organization in order to contract with the Government for the repayment of that part of the construction cost which is determined to be reimbursable. The water users benefited by the work of the Department of Agriculture would be required to repay the reimbursable money expended in that work in accordance with the amended act. Aid which may be offered by the local interests probably would be accepted.

ESTIMATED COST AND FINANCING PROCEDURE

The total cost of the project to be undertaken by this Department, excluding a proportionate part of the cost of works heretofore built, is \$62,000. In connection with the project, the Department of Agriculture expects to undertake activities pursuant to Section 5 of the Act which are estimated to cost \$73,000. The activities of both Departments would be financed with monies heretofore appropriated for Water Conservation and Utilization Projects. The total expenditure is estimated to be \$135,000.

It has been determined that the water users can repay, under the terms of the Act, \$46,900 of the investment in the works heretofore built or to be built by the Bureau of Reclamation. Of the estimated cost of \$62,000, it is expected that not to exceed \$9,500 will be charged as a part of the costs of the Fort Peck Power project, this amount representing the investment in power lines. The amount charged to that project will reduce the net construction cost of the Intake project.

There is ample capacity in the existing works of the Lower Yellowstone project to deliver the water which would be used for the Intake project. The cost of this capacity, estimated at \$6,700, is not charged to the water users of the existing Lower Yellowstone project. The repayment ability of the water users has been estimated at \$46,900. Should the net cost of the new works be less than \$46,900, it is expected that the difference between the cost of the new works and \$46,900 will be credited to Reclamation Fund when repaid.

Net construction costs in excess of \$46,900, as authorized by the Act, would be excluded from the project construction cost and would be treated as non-reimbursable.

It is estimated that the water users can repay \$53,000 of the costs of the work performed by the Department of Agriculture. All costs in excess of this amount would, as authorized by the Act, be treated as non-reimbursable.

In addition to the above estimated costs, an over-allotment should be provided for the Department of the Interior in the amount of \$23,000. This sum represents the estimated transfer value of equipment, and would be returned to the project upon completion of construction.

Sufficient funds for these purposes have been appropriated and are now available for allotment.

SIZE OF FARM UNITS

Since the exact size may vary over the project area in accordance with the varying conditions of the project lands, limitations on the various holdings will be established after more complete and final surveys have been made. It now appears that ultimately the proper size holding would be about 80 acres of irrigable land.

FINDINGS, CERTIFICATIONS, RECOMMENDATIONS

Based upon the report covering the engineering and economic aspects of the work proposed to be accomplished by the Bureau of Reclamation, I find and certify that:

1. The proposed project has engineering feasibility.
2. The total estimated cost is \$62,000, excluding a proportionate part of the cost of works heretofore built.
3. The estimated cost which properly can be allocated to irrigation is \$62,000, less such amount not to exceed \$9,500 as is finally charged to the Fort Peck Power project.
4. The water users probably can repay \$46,900 in accordance with the requirements of Section 4 of the Act of October 14, 1940, this amount including not to exceed \$6,700 of the cost of existing works built under the Federal Reclamation Law and not in connection with this project.
5. No part of the estimated cost properly can be allocated to municipal or miscellaneous water supply or power.
6. No part of the estimated cost properly can be allocated to the irrigation of Indian trust and tribal lands.
7. No part of the estimated cost properly can be allocated to flood control.
8. The proposed construction is justifiable as an aid in the production of needed agricultural products.

If you approve of this project, it is planned to proceed immediately with matters relating to land acquisition, water rights, and repayment contracts so that the requirements of the statutes may be met as promptly as possible. The project has heretofore been submitted to the War Production Board for clearance for commencement of construction and procurement of materials needed for construction.

On the basis of the foregoing report and findings, I recommend that you approve this project for construction.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE.

Approved January 20, 1944.

(Signed) FRANKLIN D. ROOSEVELT,
President.

KENDRICK PROJECT

WYOMING

The Kendrick project,¹ originally called Casper-Alcova project, was found feasible by the Secretary on August 27, 1935, approved by the President on August 30, 1935, under terms of section 4 of the act of June 25, 1910 (36 Stat. 836), and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702).

Kortes Power Development was found feasible by the Secretary November 26, 1941, but was later authorized as part of the Missouri River Basin project under the terms of the Flood Control Acts of 1944 and 1946 and was constructed as a part of the latter project. (See page 650.)

The Alcova power plant was found feasible by the Secretary on September 20, 1949 (House Document 693, 81st Cong.), and authorized August 22, 1950, under the provisions of the Reclamation Project Act of 1939 (53 Stat. 1187), section 9 (a).

OFFICE OF THE SECRETARY,
Washington, August 27, 1935.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: Section 4 of the act of June 25, 1910 (36 Stat. 835), provides in effect that after the date of that act no irrigation project to be constructed under the Act of June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924 (43 Stat. 701), provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information

¹ The *Kendrick Project* was initiated under the provisions of the National Industrial Recovery Act of 1933.

in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

The various features requiring investigation and report under this subsection will be discussed in connection with the Casper-Alcova project in Wyoming in the order in which they are presented as follows:

WATER SUPPLY

Source.—The source of the water supply for the project is the North Platte river and its tributaries. Pursuant to the laws of Wyoming, permit No. 18488, with a priority date of July 27, 1934, for the diversion of the free flow of the river and permit No. 4552 Res., with a priority of December 1, 1931, for the storage in the Seminoe reservoir of all unappropriated and flood waters of the river system, have been granted by the State Engineer of Wyoming.

Adequacy.—Water supply studies indicate that the mean annual yield of the North Platte river system is sufficient, if properly conserved and legally utilized, to supply extant rights and provide an ample supply for the project area of 66,000 acres.

However, in the interest of conservation it is planned to construct the project in two units of 35,000 acres and 31,000 acres respectively. The construction of the second unit of 31,000 acres is to be held in abeyance until the results of conservation and legal utilization of water are ascertained.

ENGINEERING FEATURES

Storage.—A storage dam will be required on the North Platte river. It will be located in the Seminoe canyon between the Seminoe and Freezout mountains and will be 37 miles northeast of Parco, Wyoming, and 73 miles southwest of Casper, Wyoming. The Seminoe dam will be of the concrete arch type, about 540 feet in length on the crest and about 260 feet in height from the lowest point of foundation to the top of the roadway and the reservoir created by its construction will have a capacity of about 1,040,000 acre-feet of storage water.

Diversion.—A diversion dam will be required on the North Platte river. It will be located in the Alcova canyon near Alcova, Wyoming, and will be 32 miles southwest of Casper, Wyoming. The Alcova diversion dam will be of earth, gravel, and rock fill embankment and will be approximately 900 feet long and about 180 feet in height above the river bed; have an open channel spillway in the north abutment of the dam; and a diversion tunnel and outlet works on the south side of the river. It will raise the low water surface of the river 170 feet, to permit diversion into the Casper canal.

Main canal.—The Casper canal, with an initial capacity of 1,200

second feet, extends, with a gradually reduced capacity, from the Alcova reservoir northeasterly for a distance of 60 miles for Unit No. 1 of the project and for a total distance of 100 miles for both project units and terminates about 6 miles north of Casper. The first 60 miles of this canal requires 6 concrete lined tunnels, with a combined length of about 17,700 linear feet, 15 reinforced concrete siphons, 62 culverts or cross drainage structures, 4 combination checks, culverts and wasteways, 21 bridges, 8 checks, and 34 headgates. On the remainder of the canal no tunnels will be required.

Lateral system.—Tapping the main canal at appropriate intervals lateral ditches with smaller distributaries leading from them will convey the water to the boundaries of each farm unit of the project. The structures of the lateral system will be constructed of reinforced concrete.

Drainage.—Comparatively good natural drainage with frequent water courses for removing waste water exists on the project, but a number of main outlet open drains with appropriate structures will be required to provide outlets for small drainage ditches which may become necessary from time to time during the operation of the project.

Power system.—A hydroelectric power plant will be constructed at the Seminole dam consisting of three 14,000 horsepower units for the generation of a uniform output of 18,000 KW or over 150 million KW Hours per annum. It is proposed to construct 300 miles of high tension transmission line together with the necessary substations to transmit the power generated at the Seminole power plant to purchasers of such power.

COST OF CONSTRUCTION, BY FEATURES

Examination and surveys.....	\$60,000
Seminole dam	3,750,000
Seminole power plant.....	2,280,000
Transmission lines and substations.....	2,470,000
Alcova diversion dam.....	3,339,000
Main canal (for first unit).....	5,220,000
Lateral system (for first unit).....	1,400,000
Drainage system (for first unit).....	1,050,000
Farm units (for first unit).....	9,000
Permanent improvements and lands.....	15,000
Telephone system	56,000
Operation and maintenance during construction (for first unit) ..	250,000
Settlement and development.....	105,000
Subtotal—First Unit	20,004,000
Main canal (for second unit).....	1,502,000
Lateral system (for second unit).....	1,085,000
Drainage system (for second unit).....	930,000
Farm units (for second unit).....	6,000
Operation and maintenance during construction (for second unit).....	80,000
Settlement and development (for second unit).....	93,000
Subtotal—Second Unit	3,696,000
Total cost, entire project.....	23,700,000

LAND PRICES AND PROBABLE COST OF DEVELOPMENT

An appraisal of the project lands is being made by a board of three members, all of whom were appointed by the Department. The tentative report of the board establishes values ranging from \$5 to \$15 per acre, or an average value of \$8.50 per acre of unimproved irrigable land. Values ranging from \$1 to \$2.50 per acre have been fixed tentatively for non-irrigable land. The report of the board of appraisers will not be final until approved by the Department. Speculation in project lands is prevented by the provision in the repayment contract with the Casper-Alcova Irrigation District requiring all landowners to execute recordable contracts agreeing to sales of their lands at prices not exceeding those fixed in the approved report of the board of appraisers; the execution of such contracts being a condition precedent to eligibility for water service from the project works.

The control of speculation in the project lands will safeguard the settlers of the project against the payment of excessive prices for farms on the project, and, with the exercise of reasonable prudence by the individual in his development program, the cost of development of a project farm will be within the economic limits conducive to successful farm operations.

About 8 percent of the project lands are privately owned, 6 percent is state land, 7½ percent are entered public lands, and 3½ percent are unentered public lands.

ADAPTABILITY OF LAND TO SETTLEMENT AND FARM HOMES

The chief economic value of the Casper-Alcova irrigation development grows out of its location. It is in the center of a large and important grazing area where there is an imperative need for winter feed for range livestock; because of this alfalfa and grain will be the principal crops. This irrigated area, therefore, will increase the use and value of a large area of grazing land.

The climate and soils of the project are adapted to the production of all temperate zone crops with yields comparable to those obtained on the adjacent North Platte project. The main crops that can be profitably grown under irrigation are alfalfa, the small grains, Indian corn, red clover, potatoes, sugar beets, and many others of minor importance. Topography and soils are generally favorable for reclamation by irrigation. Of the 200,000 acres commended by the Casper canal only the very best lands, or 66,000 acres, are included in the lands to be irrigated. A water supply for the irrigation of this area will sustain a highly intensified agriculture and make homes for from 600 to 700 additional families. Casper, with a present population of 18,000, will furnish an accessible market and marketing facilities for all crops raised and the range livestock which will be brought to the project to fatten for market.

The main lines of the Chicago, Burlington & Quincy Railroad and the Chicago & North Western Railroad are at a maximum

distance of 10 miles from 75 percent of the irrigated lands. Improved hard surfaced highways serve the project areas.

PROBABLE RETURN TO RECLAMATION FUND OF
COST OF CONSTRUCTION

The next declaration required is that the cost of construction will probably be returned to the Federal Government. This is interpreted to mean that it will be returned within the period provided in the Casper-Alcova Irrigation District repayment contract, which is 40 years from the time the Secretary issues public notice that water is available from the project works.

It is assumed that construction payments on this area, as large as on similar areas in this arid region, can be made. On this basis a yearly average construction payment of \$2 an acre has been fixed. This makes the average total minimum construction charge \$80 an acre, with operation and maintenance to be paid in addition.

The Pathfinder reservoir, constructed 25 years ago and lying immediately downstream from Seminoe, enables Seminoe outflow to be used in producing power as needed, to an amount equivalent to 18,000 KW continuous power, or 150 million KWH per year. Investigations indicate that there is an existing market for this power in Casper, Cheyenne, Rawlins, Laramie, Douglas, Medicine Bow, and Parco, which are among the principal towns of the State. The region is rich in mineral resources, including iron, platinum, gold, and non-metallic deposits. The iron ore used by the steel plants at Pueblo, Colorado, comes from this region. Even without material development of the resources, it is estimated that the entire power output of the Seminoe plant will be used in Wyoming within ten years.

The Seminoe power project is believed to be financially sound. Profits from the sale of power will repay not only the Seminoe storage and hydroelectric development but will assist in the repayment of the cost of the irrigation project. The conservation of water in the Seminoe reservoir will extend the irrigated areas of Wyoming, and the hydroelectric feature, which it makes possible, will aid materially in the development of the rich mineral resources of the State of Wyoming and like areas in adjacent States.

The favorable conditions heretofore recited justify the belief that the project will return its cost. The project is regarded as one well suited to the needs of settlers and appropriate for development as a Federal reclamation project. I, therefore, recommend its approval and the issuance of the necessary authority to this Department to make contracts for its construction, and to proceed with the work.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved August 30, 1935.

(Signed) FRANKLIN D. ROOSEVELT,
President.

NAME CHANGED TO KENDRICK PROJECT

[Extract from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1938, and for other purposes. (Act of August 9, 1937, 50 Stat. 564, 595, Public Law 249, 75th Cong., 1st sess.)

* * * * *

Casper-Alcova project, Wyoming, \$650,000: Provided, That in recognition of the respective rights of both the States of Colorado and Wyoming to the amicable use of the waters of the North Platte River, neither the construction, maintenance, nor operation of said project shall ever interfere with the present vested rights or the fullest use hereafter for all beneficial purposes of the waters of said stream or any of its tributaries within the drainage basin thereof in Jackson County, in the State of Colorado, and the Secretary of the Interior is hereby authorized and directed to reserve the power by contract to enforce such provisions at all times: Provided further, That from and after the passage of this act, the Reclamation project heretofore known as the Casper-Alcova project shall be known and designated on the public records as the Kendrick project, and that the change in the name of said project shall in no wise affect the rights of the State of Wyoming or the State of Colorado or any county, municipality, corporation, association, or person, and all records, surveys, maps, and public documents of the United States or of either of said States in which said project is mentioned or referred to under the name of the Casper-Alcova project shall be held to refer to said project under and by the name of the Kendrick project.

KORTES POWER PLANT

BUREAU OF RECLAMATION,
Washington, November 10, 1941.

The SECRETARY OF THE INTERIOR.

SIR: There is transmitted herewith a copy of a report dated October, 1941, prepared by the Chief Engineer, Bureau of Reclamation, on the proposed Kortes power development, Kendrick, Wyoming.

The proposed development comprises a concrete gravity dam 197 feet in height at a site on the North Platte River 2.1 miles below the existing Seminole Dam, a pressure tunnel 750 feet long with a capacity of 2,150 cubic feet per second leading to the power plant which will have an installed capacity of 30,000 kilowatts in three units and a transmission line to Loveland, Colorado, with a connection to Seminole power plant. The estimated construction cost under present high prices is \$8,310,000. The estimated cost of construction under normal conditions is \$7,045,000.

On the basis of present high prices the annual cost of the project will be \$517,000 including amortization of investment in 40 years with interest at 3%. The plant will produce 101,000,000 kilowatt-hours of firm energy and an average of 61,000,000 kilowatt-hours of secondary, annually, which will have a value of \$564,000 or \$47,000 greater than annual costs. The power will be marketed over the interconnected system of the Shoshone, River-ton, Kendrick, North Platte and Colorado-Big Thompson projects. The entire output of the plant should be absorbed soon after it is completed.

On the basis of the foregoing I recommend that you find the Kortess power development feasible and transmit copies of the report to the President and the Congress as provided by Section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

Respectfully,

(Signed) H. W. BASHORE,
Acting Commissioner.

OFFICE OF THE SECRETARY,
Washington, November 26, 1941.

THE PRESIDENT,
The White House.
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: In accordance with the provisions of Section 9 (a) of the Reclamation Project Act of 1939, Act of August 4, 1939 (53 Stat. 1187), this report and finding is made on the Kortess power development proposed to be constructed as works supplemental to the Kendrick Project, Wyoming. The report was prepared in the office of the Chief Engineer, Bureau of Reclamation, and is based on studies and investigations conducted by the Bureau of Reclamation. I hereby approve and adopt it.

Based on this report, I find that: the supplemental works are feasible from an engineering standpoint; the estimated cost is \$8,310,000 based on present high prices and \$7,045,000 based on prices under normal conditions; the entire cost properly should be allocated to power and an amount greater than the cost, under

present high prices, will probably be returned to the United States in net power revenues.

Similar letters and copies of the report will be submitted to the President of the Senate and the Speaker of the House of Representatives upon advice from the Director of the Bureau of the Budget that such submission is in accord with your program. This procedure is to conform with the provisions of the Executive Order of June 26, 1940.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

ALCOVA POWER PLANT

BUREAU OF RECLAMATION,
Washington, D. C., September 13, 1949.

THE SECRETARY OF THE INTERIOR.

SIR: This is my report on the installation of the Alcova power plant and appurtenant facilities as a supplemental works to the Kendrick project, Wyoming. My report is based on and includes the attached report of the regional director of the Bureau of Reclamation, Project Planning Report No. 7-10.20-1, revised August 16, 1949.²

The Kendrick project, originally authorized as the Casper-Alcova project is an irrigation and power project located in the North Platte River basin in central Wyoming. Principal river control features of the project include the Seminoe Dam and Reservoir and the Alcova Diversion Dam, both of which are located on the North Platte River. Primary purpose of the project is the irrigation of lands north and west of the city of Casper, Wyoming. Water released from Seminoe Reservoir is used to generate hydroelectric power in the Seminoe Power Plant, and is re-regulated in the Pathfinder Reservoir of the North Platte project. Diversions for the Kendrick project are made into the Casper Canal which diverts from the pool behind Alcova Dam, which is a few miles downstream from the Pathfinder Dam. Irrigation releases from the Pathfinder Reservoir for the North Platte project are passed downstream through the Alcova Dam. The regional director recommends the installation of a hydroelectric power plant with an installed capacity of 33,000 kw at the Alcova Dam to make use of these releases. Operating under a head of up to 165 feet, the proposed plant would generate an average of 92,000,000 kwh annually under present conditions. The pro-

² Excluded from this publication.

posed plant would be operated without changing the present flow of the river, and without affecting present water rights on the North Platte River in any way.

The power which could be generated by the installation of this plant is urgently needed in the Casper area. The use of electricity has increased since the war at rates exceeding the rate of increase before the war, and as a result existing power generating facilities are taxed to their utmost capacity to serve the present loads without adding the many potential customers awaiting service. During periods of peak loads, it has been necessary for the Bureau of Reclamation to request its customers to curtail their uses of electrical energy in order that some customers would not experience complete power blackouts. Until new sources of energy are available, the situation with respect to the meeting of present loads will remain critical, and the accommodation of potential new loads, such as irrigation pumping and rural cooperatives will not be possible. The Alcova power plant could be put into service before 1953, and would be invaluable in meeting power needs of the area.

The estimated cost of the proposed power plant and appurtenant facilities is \$6,377,000. Cost of operation and maintenance, including reserves for replacements, is \$136,000 annually. Revenues from the sale of power generated at the proposed plant would total \$380,100 annually, which is sufficient to pay operation, maintenance, and replacement charges, and to retire the estimated construction costs in 50 years at 3 per cent interest.

I find that the proposed supplemental works are engineeringly feasible; that the estimated costs are, for the purpose of this report, properly chargeable to commercial power production; and that these costs will probably be returned to the United States by the power revenues that will result from the sale of the power produced. I find, further, that these works being entirely for commercial power production, and having no effect on the operation of the North Platte River system for irrigation, are not works for irrigation and purposes incidental thereto within the meaning of subsection 1 (c) of the Flood Control Act of December 22, 1944 (58 Stat. 887). It follows that upon your approval of this report and submission of it to the President and the Congress, the proposed works may be regarded as authorized under the provisions of section 9 under the Reclamation Project Act of 1939.

I recommend that you approve and adopt this report and the findings herein made, and that you submit them together with this letter to the President and to the Congress.

Respectfully,

(Signed) KENNETH MARKWELL,
Acting Commissioner.

Enclosure ³

Approved and adopted: September 20, 1949.

(Signed) MASTIN G. WHITE,
Acting Secretary of the Interior.

³ Excluded from this publication.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY.
Washington 25, D. C., September 20, 1949.

THE PRESIDENT,
The White House.
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: There is enclosed a copy of a report to me from the Commissioner of Reclamation with an accompanying report on the feasibility of the installation of the Alcova power plant on the Kendrick project in Wyoming, prepared pursuant to the provisions of section 9 of the Reclamation Project Act of 1939. I have approved and adopted the report and the accompanying findings as set forth in the Commissioner's report. Consequently, the installation of the Alcova power plant and appurtenant facilities is authorized under the provisions of section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

Unless you have objection, this report will be transmitted to the Congress in accordance with the provisions of the Reclamation Project Act of 1939.

Sincerely yours,

(Signed) MASTIN G. WHITE,
Acting Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington 25, D. C., July 27, 1950.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This will acknowledge receipt of Acting Secretary White's letter dated September 20, 1949, transmitting a copy of the feasibility report of the Commissioner of Reclamation on the installation of the Alcova power plant on the Kendrick project in Wyoming which you have approved and adopted in accordance with provisions of section 9 (a) of the Reclamation Project Act of 1939.

The report recommends construction, operation, and maintenance of a hydroelectric-power plant with an installed capacity of 33,000 kilowatts at a total estimated incremental cost of \$6,377,000. The power plant would use the water from the existing Pathfinder Reservoir, which is released through Alcova Dam for

irrigation purposes on the North Platte project downstream. The cost of operation and maintenance, including reserves for replacements, is estimated at \$136,000 annually. The annual costs of the Federal investment are stated to be \$181,000 computed on the basis of 100 years at 2½-percent interest. Revenues from the sale of power generated at the proposed plant, estimated to total \$380,000 annually, would, however, be sufficient to pay operation, maintenance, and replacement charges and to retire the total estimated construction cost in 50 years at 3 percent interest.

The report of the regional director states that the addition of the Alcova power plant to the Kendrick project would reduce the over-all period required for project repayment by 16 years. This evidently would be possible only through application of the interest component of the power revenues as a credit toward repayment of costs allocated to irrigation. The Acting Commissioner of Reclamation finds, however, that the works are entirely for commercial-power production and would have no effect on the operation of the North Platte River system for irrigation. The Commissioner of Reclamation, in memorandum to this office dated March 3, 1950, stated that it would be appropriate to justify the authorization of the proposed works on the basis that they are separate and distinct from the Kendrick project.

The question of the use of a 100-year period in computing annual costs was questioned in Director Pace's letter of March 17, 1950, on the North Fork Kings River development in California. Similarly, the President's position on the use of the interest component of the power investment for subsidy to irrigation was pointed out in Director Pace's letter to you of February 1, 1950, on the Columbia Basin project and Director Lawton's letter to you of July 17, 1950, on the Palisades project.

Since annual revenues would be sufficient to retire the Federal investment in the power plant, with interest, in 50 years, there would appear to be no reason for the computation of the annual costs on the basis of 100 years. Also, since, as stated by the Commissioner of Reclamation, the authorization of the proposed power plant would be separate and distinct from the Kendrick project, the repayment requirements can also be kept distinct and separate and the question of the use of the interest component need not be raised. As an incremental addition to the Alcova Dam, therefore, the work appears justified.

On this basis, I am authorized to advise you that there would be no objection to the submission of the report to Congress.

Sincerely yours,

(Signed) W. McCANDLESS,
Assistant Director, Estimates.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., August 22, 1950.

Hon. SAM RAYBURN,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: Pursuant to the Reclamation Project Act of 1939, there are transmitted herewith a report and findings on the feasibility of the installation of the Alcova power plant and appurtenant facilities as an incremental addition to the Alcova Dam, Kendrick project, Wyoming.

On September 20, 1949, the report and findings were transmitted to the President. The Bureau of the Budget, by letter dated July 27, 1950, has advised that there would be no objection to the submission of the report to the Congress. The Bureau of the Budget indicated further its understanding that the authorization of the proposed power plant would be separate and distinct from the Kendrick project.

With the transmittal of the report and findings to the Congress, the requirements of section 9 (a) of the Reclamation Project Act of 1939 have been fulfilled. Consequently, installation of the Alcova power plant and appurtenant facilities as an incremental addition to the Alcova Dam, Kendrick project, is authorized.

In addition to the report and findings, there are enclosed a copy of this Department's letter of September 20, 1949, to the President and a copy of the letter from the Bureau of the Budget dated July 27, 1950.

Sincerely yours,

(Signed) OSCAR L. CHAPMAN,
Secretary of the Interior.

KING HILL PROJECT¹

IDAHO

The act of June 12, 1917 (40 Stat. 105, 148), appropriated the sum of \$200,000 for construction of the King Hill project provided the Secretary determined the project practicable in accordance with the Reclamation Act of 1902. The Secretary so determined on July 2, 1917.

UNITED STATES RECLAMATION SERVICE,
Boise, Idaho, August 17, 1916.

From: Board of Engineers
To: Chief of Construction, Denver, Colorado
Subject: Report on King's Hill Project—Idaho

1. *Instructions.*—In accordance with instructions of the Director and Chief Engineer, May 13, 1916, and supplementary instructions from Chief of Construction, the undersigned Board of Engineers has examined the King's Hill Project, and submits the following report:

2. *Location and description.*—The project is situated in south-central Idaho, in Gooding, Twin Falls, Owyhee and Elmore counties, upon bench lands lying along both sides of Snake River in the vicinity of the towns of Bliss, King Hill, Glenns Ferry and Hammett, the town of King Hill being near the geographical center and Glenns Ferry, with a population of about 1,200, being the largest town within the project, and an operating division station on the Oregon Short Line Railway system.

The tract comprises about 16,000 acres, extending in a narrow strip on either side of Snake River from near the mouth of the Malad River to Bennett Creek, a distance of 45 miles. The lands of the project have proved to be very fertile and productive, but

¹ The *King Hill Project* was difficult and costly to operate. In 1929 a committee which made an economic survey of certain reclamation projects concluded that the King Hill Project was an insolvent enterprise and recommended that no further expenditures be made. The Act of June 18, 1934, 48 Stat. 980, authorized the Secretary to enter into a contract with the King Hill Irrigation District, by which the district and the United States would rescind previous agreements and be released from all obligations. The United States entered into such a contract on September 28, 1934.

the surface is broken by a number of deep ravines, which, together with the necessity of four separate crossings of Snake River to reach different parts of the tract, and the great length of the tract compared with its small acreage, makes the irrigation system an expensive one.

The character of the country is such that an unusual amount of flume and pipe construction is necessary, and the formation of much of the country crossed by flumes is such that the unavoidable leakage from the timber flumes used in the original construction caused extensive slides and other disturbances of the surface.

3. *Water supply.*—The water supply is obtained from the Malad River, the point of diversion being about one mile above its confluence with the Snake River. This stream is fed by springs, starting at a point about three miles from the mouth of the river and aggregating about 1,100 second-feet at the point of diversion. The flow is the same winter and summer except when it is increased by surface waters. The supply of 1,100 second-feet was originally owned by the King Hill project, but was conveyed to the Beaver River Power Company in consideration of an agreement by the latter company to build and maintain the diversion dam on the Malad and the conduit leading from it to the head of the pressure pipe carrying the project water across Snake River, at which point it is obligated to deliver 300 second-feet to the project.

The water supply appears to be unquestioned as to title, unfailing in its source, and ample in amount for the available project lands.

4. *Project status.*—This is a Carey Act project under segregation dated March 7, 1904, for 17,667 acres, and October 6, 1909, for 9,455 acres.

The original project, built by the King's Hill Irrigation and Power Company, included only the lands on the south side of Snake River, but one-third of the water right was conveyed to the King's Hill Extension Irrigation Company, which was organized to cover the lands on the north side of the river in the vicinity of King Hill, Glens Ferry and Hammett. For the purpose of this report, the original King's Hill project and the King's Hill Extension project are considered as one enterprise.

The irrigation works were completed in accordance with the original plans, and water was first used on the original segregation in 1910 and on the Extension in 1911, since which time delivery has been made during each irrigation season.

* * * * *

12. *Suggested plan of reconstruction.*—The present works have been in use from six to seven years, in which time all the weak spots have been developed and some have been cured. We feel that an estimate of reconstruction upon the present location will be reasonably safe and that modifications can be made when careful study shows that they will effect a saving.

In the proposed reconstruction all timber flumes are to be

replaced. In a few unimportant cases, short flumes will be replaced by earth sections, and in all other cases they will be replaced by steel flumes with concrete approaches and concrete footings.

The trestles will be replaced with new timber trestles resting on concrete pedestals.

The wood stave pressure pipes will be retained, with some repairs, but they will be supplied with concrete supports, and with concrete pressure boxes where the present boxes are of timber.

The earth canals are in good condition and will only need to have their banks raised in places and to have the present wooden tap boxes replaced with concrete.

Concrete lining has been estimated upon to fill short gaps between sections of lining now in place, and in places where necessary to insure against breaks.

An allowance has been made for repairs and extension of the lateral system, and a new telephone line has been included.

13. *Estimated costs.*—Reconstruction of the present system as above outlined, to enable it to supply the net irrigable area of 16,000 acres, is estimated to cost as follows:

Main canal work:

Steel flumes	\$308,560	
Concrete lining for canals.....	36,500	
Repairs to pressure pipes.....	48,200	
Repairs to canals in earth.....	30,300	
Structures	40,830	\$464,390

Distribution system	46,740	
Telephone and miscellaneous.....	16,100	

Total	527,230
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These figures include an allowance of 15% to cover engineering and overhead costs, and a small contingent margin. In view of the fact that the system has been tried out for years and all weak spots ascertained by experience, there is small likelihood of unforeseen construction difficulties of magnitude. In addition it may be stated that the unit prices used are in themselves sufficiently liberal to establish a substantial margin of safety; moreover, in all cases of doubt the estimates have included provision for new structures with no allowance for salvage on present structures.

* * * * *

(Signed) A. J. WILEY,
Consulting Engineer.
 E. G. HOPSON,
Consulting Engineer.
 D. W. COLE,
Senior Engineer.

PROVISIONS OF SUNDRY CIVIL EXPENSES
APPROPRIATION ACT, 1918

[Extract from] An act making appropriations for sundry civil expenses of the Government for the fiscal year ending June thirtieth, nineteen hundred and eighteen, and for other purposes. (Act of June 12, 1917, 40 Stat. 105, 148, Public Law 21, 65th Cong., 1st sess.)

* * * That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, for the fiscal year ending June thirtieth, nineteen hundred and eighteen, namely:

* * * * *

King Hill project, Idaho: For beginning construction, maintenance, operation, and incidental operations, \$200,000: *Provided,* That no part of this appropriation shall be expended until the Secretary of the Interior shall have determined that the said King Hill project is practicable, as provided by Section four of the act approved June seventeenth, nineteen hundred and two, known as the Reclamation Act, and shall have adopted the said project under and subject to the provisions and conditions of the said Reclamation Act.

DEPARTMENT OF THE INTERIOR,
UNITED STATES RECLAMATION SERVICE,
Washington, D. C., June 18, 1917.

THE SECRETARY OF THE INTERIOR.

SIR: Provision has been made in the Civil Sundry Bill for an expenditure of \$200,000 for the King Hill Project, Idaho, upon which it is proposed to spend the sum of \$800,000.

An irrigation district has been formed for the purpose of contracting with the United States for the work, and there is handed you herewith a draft of contract.

This contract form contains one improvement over the contract with the organized water users of any project heretofore undertaken, namely, a plan whereby those who cultivate their lands will be favored in the character of the instalment plan, under which reimbursement may be made to the United States through the irrigation district.

This plan is embodied in paragraph 8 and provides for the repayment to the United States in five equal annual instalments, with provision that if a certain reclamation program be carried out by the individual land owners they shall have 20 years in which to make repayment through the district. If, however, the program is only carried out to a specified extent, the land owners have 10 years in which to make repayment through the district.

Provision which I believe sufficient for the carrying out of such a program on the part of the irrigation district is made in the Idaho Irrigation District Law as follows:

Whenever any amount of money shall have been advanced by the United States for the construction of irrigation works, contemplated under the provisions of this title, by the authority of said Act of Congress, the taxing powers of the district, as provided in this title, shall be used to repay into the Treasury of the United States the amount of money so advanced in the manner contemplated in this title, and *as may be provided in such contract between the Directors of said district and the United States*; and such levies and assessments shall be made each year under the authority of the district as will return to the Treasury of the United States the amount or *proportion of such money advanced as may have been agreed to in such contract*. (Section 2398 of Idaho Revised Codes as amended, Laws of 1915, page 304.)

This plan, if adopted, will unquestionably be efficacious in bringing the lands under immediate cultivation and will, as regards this project at least, do away with the long period of partial cultivation which has held back several of our reclamation projects. Our reports from field officers of the Service, indicate that the Directors of the irrigation district are strongly for this feature.

The lands of the project were largely segregated under the Carey Act and there has been a long period of struggle and ill-success; the lands of the district have been partially under cultivation for a number of years through a make-shift system.

While lands segregated in favor of the State under the Carey Act are not expressly referred to in the Act of August 11, 1916, commonly known as the Smith Act, the intention of the Statute to confer upon irrigation districts the power of taxation over all public lands of the United States where the project is approved by the Department of the Interior, is evident. It is quite probable that the lands can be patented prior to the payment date of the first instalment in December 1919, with due diligence in our construction program, and under the contract terms requiring cultivation above outlined.

It is recommended that the draft of contract be approved and that the Commission be authorized to negotiate the making of contract in substantially the form approved.

Respectfully,

(Signed) W. R. KING,
Acting Director and Chief Counsel.

Recommendation approved July 2, 1917.

(Signed) FRANKLIN K. LANE,
Secretary.

KING HILL IRRIGATION DISTRICT AGREEMENTS RESCINDED

An act to convey to the King Hill irrigation district, State of Idaho, all the interest of the United States in the King Hill Federal Reclamation Project, and for other purposes. (Act of June 18, 1934, 48 Stat. 980, Public Law 378, 73d Cong., 2d sess.)

That the Secretary of the Interior is hereby authorized to enter into a contract with the King Hill irrigation district, organized under the laws of the State of Idaho, by which said district and the United States shall rescind the agreements between them of March 2, 1926, November 14, 1923, January 11, 1922, June 17, 1920, and December 17, 1917, each party in such rescissory agreement to release the other from all obligations, accrued or to accrue, under the said five agreements, and the United States as a part of said rescissory agreement to quitclaim to the said district all the right, title, interest, and estate of the United States in or to said King Hill Reclamation projects, including the water rights thereof and any real estate acquired or held by the United States in connection therewith.

KLAMATH PROJECT

OREGON-CALIFORNIA

The Klamath project was authorized by the Secretary under the Reclamation Act of 1902 (32 Stat. 388), on May 15, 1905; it was examined and reported upon by a Board of Army Engineers and approved by the President on January 5, 1911, in accordance with act of June 25, 1910 (36 Stat. 835).

UNITED STATES GEOLOGICAL SURVEY,
RECLAMATION SERVICE,
Los Angeles, California, May 1, 1905.

CHIEF ENGINEER,
U. S. Geological Survey, Washington, D. C.

DEAR SIR: Your Board of Consulting Engineers appointed for the Klamath Project has fully reviewed the plans and estimates submitted by the Project Engineer, detailed and revised reports of which are transmitted herewith, and begs leave to report as follows:

The total irrigable area under the Klamath Project is 236,401 acres net, divided as follows:

	<i>Acres</i>
Public lands, 45 per cent.....	106,929
Private lands, 55 per cent.....	129,472
Total	236,401

Of this area 90,000 acres, or 38 per cent, are in California, and 146,401 acres, or 62 per cent, are in Oregon. We believe the charges for this project should be proportioned on this ratio between these states.

Physical reasons exist for the apportionment of cost against this project. The upper valleys in the project will necessarily be under a reservoir system. The province of these reservoirs will be both that of supplying irrigation water to these valleys and also to prevent storm waters passing into Tule Lake, which lake it is proposed to drain. The upper valley lands, in our judgment, should pay 50 per cent of the cost of these storage works, the balance of the cost of storage to be assessed against the lake beds.

Klamath Basin proper will be irrigated from the Upper Klamath Lake and can naturally be more economically irrigated than other portions of the project. We believe that these lands should be given the benefit therefor.

The Tule Lake bed is a sink or depression, from which it is proposed to cut off the water supply, thus permitting of the partial drying up of the lake by evaporation. These lands, therefore, receive a double service, for which it is considered proper they should adequately pay. For this reason, 50 per cent of the charges for the construction of the storage works above referred to have been made against the lake bed lands. As the lands in the bed of this lake are all public, new settlers can afford to pay a higher water rate thereon than they could do for private lands, which first must be purchased and in addition the water right paid for. We therefore have classified these charges as follows:

	Acres			
Upper Valley	48,356	@	\$19.60	\$947,776
Klamath Basin	140,797	@	17.09	2,406,043
Tule Lake Bed.....	47,248	@	22.03	1,040,492
Total	236,401		18.59	4,394,311

This provides for a system of irrigation and drainage canals for the entire area. Water supply is ample. The lands are fertile and require irrigation, the climatic conditions permit of growing staple crops. Maps of the project have previously been sent to the Chief Engineer.

The people are anxious to obtain irrigation under the provisions of the Reclamation Act. The State of Oregon is the greatest contributor to the Reclamation Fund, and the State of California is fifth on the list.

Private water rights have been carefully considered by the Engineers. Options have been obtained and submitted with a preliminary report under date April 14th, 1905, on the Klamath Falls Irrigation Co. and on the Little Klamath Water Distribution Co. These canals have been using water for irrigation for over fifteen years. We have also a tentative agreement with the owners of the Carr Ranch for the Clear Lake Reservoir Site, including water and riparian rights on Clear and Tule Lakes. These agreements have been approved by the Water Users' Association, and, as we understand, also by the Chief Engineer and the Secretary of the Interior. These are the main water rights involved by this project. These canals now irrigate 12,000 acres.

The Klamath Canal Co., organized May 18, 1904, has spent about \$100,000 on irrigation and construction works for the irrigation of 30,000 acres of land in the Klamath Basin. They propose diverting water from Upper Klamath Lake, but the Department of Justice has obtained a temporary injunction against them, as this will be an unauthorized interference with interstate navigable waters. The final hearing on this injunction will be held May 24th, 1905.

We have persistently tried to reach an agreement with this com-

pany, notwithstanding that we cannot use the works they have built. They ask \$200,000 for a sale of all their interests, and, in order to prevent delay and discord, we have offered to recommend the payment to them of \$150,000 for these rights. This offer the company has declined. We cannot consistently recommend further negotiations with them. We have, however, inserted a figure in our estimate of \$150,000 for any contingencies which may grow out of this situation.

This project is necessarily an inter-state or national problem, owing to the navigable inter-state character of the rivers and lakes involved. Both the States of Oregon and California, and the United States Congress, have passed the necessary legislation for the construction of this project, and the disposal of the irrigated lands. Our estimate provides for the preservation and maintenance of all essential navigation interests.

We therefore recommend that an allotment of funds sufficient for the construction of this project as outlined above should be made, and that the Supervising Engineer be instructed to prepare his plans and final estimates for the completion of the work; also that the land owners be informed that before construction can begin practically all private land owners must sign agreements with the Klamath Water Users' Association, which has been duly organized under the Laws of Oregon.

As surveys have not yet been made looking towards the irrigation of arid lands either in Shasta Valley or in Butte Valley, we cannot now make recommendations concerning this possible portion of the projects. The works so far considered, however, have been so planned as to permit of the expansion of the project to cover these areas, if in the future it is deemed desirable.

Yours very truly,

(Signed) GEO. Y. WISNER.
W. H. SANDERS.
JOSEPH JACOBS.
T. H. HUMPHREYS.
J. B. LIPPINCOTT.

UNITED STATES GEOLOGICAL SURVEY,
May 10, 1905.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: With reference to the Klamath project in southern Oregon and northern California, a board of engineers consisting of Messrs. Geo. Y. Wisner, consulting engineer; W. H. Sanders, consulting engineer; Joseph Jacobs, consulting engineer; J. B. Lippincott, supervising engineer, and T. H. Humphreys, district engineer, has made a report dated May 1 upon the plans and estimates. This report in brief brings out the fact that the total irrigable area is as follows:

	<i>Acres</i>
Public lands, 45 per cent.....	106,929
Private lands, 55 per cent.....	129,472
Total	236,401

Of this area, 90,000 acres are in California and the remainder, or 62 per cent are in Oregon.

The estimated cost of the ultimate reclamation of this land is in round numbers \$4,400,000 or \$18.60 per acre. The lands are of excellent quality and this cost is notably low.

There has already been approved by you conditionally, under date of April 28, 1905, three agreements for the purchase of private rights which form the key to the situation. All future action depends upon the acquisition of these rights.

Suit has been entered to determine the rights of the Klamath Falls Canal Company, this being at the present time the chief obstacle to the project. A telegram recently received indicates that this company will, as a result of long negotiation, accept \$150,000 for the purchase of their rights except the unnecessary real estate. The board of engineers endorse the purchase from the Klamath Canal Company and have in their estimates included the amount of \$150,000 to cover this matter. With the Klamath Canal Company out of the way the field is clear and there appears to be no reason for further delaying the project.

The conditional approvals heretofore given to the three options under this project are not satisfactory to the parties and the conditions are such that immediate action must be taken to secure favorable terms.

FUNDS AVAILABLE

The State of Oregon has contributed to the Reclamation Fund up to June 30, 1904, \$4,158,583. By June 30, 1906 it is estimated that the funds will be \$6,000,000 and the estimated restricted fund for Oregon up to June 30, 1906 may be over \$3,000,000. In other words, this amount should be expended in Oregon under a strict construction of the law.

Of this amount \$2,250,000 has been provisionally allotted to the Malheur project, but this project is not making rapid progress and an indefinite time will elapse before this amount will be needed. The balance in the restricted fund, over \$760,000 without touching the unrestricted portion, will suffice to start work on the Klamath project.

In view of the large amount of money which has come in from Oregon, I think it would be wise to set aside \$4,400,000 for the Klamath project out of the funds which may be available in the future and at the present time to allot \$1,000,000 definitely from the funds now in hand.

RECOMMENDATIONS

- (1) It is respectfully recommended that purchase of all neces-

sary rights be concluded with the Klamath Falls Company at not to exceed \$150,000.

(2) That the options now heretofore considered and conditionally approved by the Department be now definitely approved subject to the usual condition of furnishing good title and that this office be authorized to advise the said parties that the rights and property in question will be purchased at the prices stated under the conditions of the options heretofore conditionally approved, upon the showing of good title and compliance with the usual conditions of purchase, namely, the Klamath Falls Irrigation Co., and The Little Klamath Water Ditch Co., furthermore, that an agreement in due form for the purchase from S. L. Akins of the property of the Jesse D. Carr Land and Live Stock Co., as heretofore specified at the price heretofore stated will be approved when presented.

Very respectfully,

(Signed) C. D. WALCOTT,
Director.

UNITED STATES GEOLOGICAL SURVEY,
Washington, May 12, 1905.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: I have the honor to submit the following as additional to my letter of the 10th instant in regard to the Klamath Project, Oregon.

The Board of Engineers has reported favorably on the project and I concur in its recommendation.

In said letter the suggestion was made that it would be wise to set aside \$4,400,000 for the Klamath Project out of the funds which may be available in the future and at the present time to allot \$1,000,000 definitely from the funds now in hand.

I desire now to make a recommendation to that effect, namely, that \$4,400,000 be set aside for the Klamath Project out of the funds which may be available in the future, and at the present time the sum of \$1,000,000 be allotted from the funds now in hand, with a view to the purchase of the property which is the subject of options heretofore submitted for your consideration and for taking up and constructing an integral portion of the project which in the terms of Section 4 of the Reclamation act it may be practicable to construct and complete as a part of the whole project, the specific portion of the work to be taken up being left for future report by the Board of Engineers.

Very respectfully,

(Signed) CHAS. D. WALCOTT,
Director.

OFFICE OF THE SECRETARY,
Washington, May 15, 1905.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: In letters of the 10th and 12th instant, to the Department, you presented the matter of the proposed Klamath Project, in southern Oregon and northern California, under the act of June 17, 1902, 32 Stat. 388, reported on to you on the 1st instant by a Board of Engineers of the Reclamation Service.

This correspondence includes statements in detail relating to the conditions affecting the project and the action essential on the part of the United States to the ultimate completion of the project if adopted.

I learn therefrom that the total irrigable area under this project embraces 236,401 acres of which 45 percent, or 106,929 acres, are public lands and 55 percent, or 129,472 acres, are private lands, and that 90,000 acres are in California and the remainder, or 62 percent, are in Oregon.

It appears that the estimated cost of the reclamation of the lands is, in round numbers, \$4,400,000, or \$18.60 per acre, the lands being reported to be of excellent quality and the cost of reclamation being, in your opinion, notably low.

You have stated that the Board of Engineers has reported favorably on the project and have advised me that you concur in its recommendation and have further recommended that \$4,400,000.00 be set aside for the project from the funds which may be available in the future and that there be now apportioned from the funds in hand the sum of \$1,000,000, with a view to the purchase of the property now the subject of options and for entering on and constructing an integral part of the project as authorized by section 4 of the act.

You have referred to the conditional approval in Departmental letters to you, on the 28th ultimo, of agreements to purchase certain private rights which it is necessary to acquire, and have asked authority to advise the parties, viz: the Klamath Falls Irrigation Company and the Little Klamath Water Ditch Company that the rights and property in question will be purchased at the prices stated under the conditions of the options heretofore conditionally approved on the showing of good title and compliance with the usual conditions of purchase; also that an agreement in due form for the purchase from S. L. Akins of the property of the Jesse D. Carr Land and Live Stock Company as heretofore specified at the price heretofore stated when presented will be approved.

With respect to the property of the Klamath Canal Company you have submitted a copy of a further report of the Board of

Engineers, dated the 5th instant, together with a copy of a memorandum of agreement proposed to be entered into with the company for the acquisition by the United States of water rights, canals, rights of way, tunnel route, etc., necessary in carrying out the project, and have recommended that the memorandum be approved.

The Board has recommended that an option be agreed to for the purchase of the rights and interests of this company for \$150,000.

I have considered your several letters and recommendations and in accordance therewith I hereby, on the condition hereafter stated, adopt the Klamath Project and authorize you to cause the construction thereof to be entered on under the act; I also, on the same condition, set aside for the construction of the project from funds that may become available in the future the sum of \$4,400,000 and hereby apportion the sum of \$1,000,000 as a part of the cost of construction, from the fund provided by the act now in hand; I also, on the same condition, authorize you to advise the Klamath Falls Irrigation Company in accordance with your recommendation, and inform you that an agreement with S. L. Akins will be approved when presented, subject to the conditions covered by your recommendations.

The memorandum of the Board covering the rights and property of the Klamath Canal Company is also hereby approved as you have recommended.

The condition on which the foregoing Department action hinges is the acquirement by the United States of the rights and property of the Klamath Canal Company, as per memorandum submitted by the Board.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

LAWTON PROJECT

OKLAHOMA

Construction of the Lawton project was determined to be practicable and advisable by the Secretary on October 7, 1914, and approved by the President on October 8, 1914, under provisions of the act of June 17, 1902 (32 Stat. 388) as modified by section 4 of the act of June 25, 1910 (36 Stat. 836). Subsequently water rights were assigned to the City of Lawton, Okla., to insure a water supply for Fort Sill military post, and consequently the irrigation project was not continued.

U. S. RECLAMATION SERVICE,
November 20, 1913.

The SECRETARY OF THE INTERIOR.

SIR: In accordance with your direction at Tahoe, California, Mr. R. F. Walter, supervising engineer, visited the City of Lawton, Oklahoma, and examined the irrigation project in that vicinity. Mr. Walter has made report upon this project, copy of which is herewith transmitted.

There is less than one complete year of measurement of the water supply available for this project, but it happens that the period covered is one of just about normal rainfall and should indicate approximately an average water supply.

During the year observed there was just about enough water for the town of Lawton and Fort Sill Indian Reservation, and to compensate for evaporation on the surface of the reservoir, which is necessary to regulate the flow for this use.

Unless the year observed is very misleading, there would be practically no water supply for irrigation in any normal year or any year below normal in runoff.

Attention is called particularly to paragraph 21 of Mr. Walter's letter, where he mentions two possibilities of failure on this project:

1. That immediately after its construction there should come a series of wet years, and, therefore, the farmers will fail to build

a lateral system or to use the water and the project will go into disuse.

2. That immediately after the construction of the project there should come a series of dry years and as the present water supply indicates a shortage of water and not enough flow into Medicine Bluff Creek to supply the city and the irrigation project, and the Reclamation Service would, therefore, be blamed for having taken up the project where there was a shortage of water, besides being unable to collect the money expended.

On the basis of the present records, it appears that the water supply available for this project would be practically nil in years when it was needed and in such years as might furnish a surplus water supply that could be used for irrigation, the rainfall would be so heavy that irrigation water would not be needed and would not be used.

There is a possibility, however, that the year of record may be very abnormal in the relation of runoff and rainfall. This suggests the only remaining chance of working out a successful project here.

If the runoff for the past year is an abnormally small percentage of the rainfall as claimed locally, this fact should be developed by continuing the observations of stream flow for two or three more years, and it seems wise to do this before entirely abandoning the project.

RECOMMENDATION

It is respectfully recommended that the construction of this project be for the present suspended owing to lack of adequate water supply, and that the observations of runoff be continued for another year, to be used as a basis for reconsidering the whole question at the end of 1914.

Respectfully,

(Signed) A. P. DAVIS,
Acting Director.

Recommendation approved.

The above letter was returned to the Chief Counsel, Reclamation Service, by the Secretary's Office on December 30, 1913, under the following memorandum:

"I return herewith a proposed recommendation to the Secretary dated November 20, from the Reclamation Commission, with regard to the proposed project at Lawton, Oklahoma. I understand that this matter was discussed at the reclamation conference on Saturday, and that the matter is now in the hands of the commission for disposition."

Subsequent action and approval is described in the following correspondence.

U. S. RECLAMATION SERVICE,
July 31, 1914.

The SECRETARY OF THE INTERIOR.

SIR: With reference to the Lawton, Oklahoma, project, it appears that the conferees on the Indian appropriation bill have agreed upon the following amendment:

That the Secretary of the Interior be, and he is hereby authorized to contract for water rights for the irrigation of not to exceed 600 acres of land in the Fort Sill Indian School Reservation in the State of Oklahoma, within the proposed Lawton reclamation project, for the irrigation of not to exceed 2,500 acres of Indian and private lands, upon the same terms and conditions as those prescribed for the acquisition of water rights for other lands to be irrigated by said project: *Provided*, That operation and maintenance charges shall not be assessed against said Indian land prior to the completion of the lateral system so as to provide for actual delivery of water thereto, and the project shall include lateral construction for the Indian lands down to each legal subdivision thereof equal in area to the size of the farm unit for lands in private ownership, within said project.

This action seems to remove one of the obstacles to further progress. The Commission desires to call to your attention the present conditions and make certain recommendations.

Public Land: On December 27, 1913, you dictated the following memorandum:

We will enter upon the project provided a method is worked out satisfactory to the Commission by which a large body of public land is brought into the project, the amount to be left to the Commission and provided also that the owners of private lands agree to the fixing of the units in accordance with the decision of the Commission, both of these things to be done prior to the order for the construction of the work.

The Commission took up this matter of public land and ascertained from the Indian Service that there are no public lands available but that there are certain Indian school lands which may be irrigated. As an outcome of this matter, the item above noted was inserted in the Indian Appropriation bill, but without the knowledge of the Commission, materially modifying the plans discussed and compelling a radical change in policy in that, instead of making available any public lands, it resulted in the Reclamation Fund being utilized for irrigation of lands for the use of the Indian school.

However, as Congress has taken the matter out of our hands, it is presumable that the Commission must modify its plans accordingly.

Signing Up: The second condition to be met in carrying out this project is the signing up by the landowners of a compact

area of approximately 1,900 acres which with the 600 acres of Indian school land will aggregate 2,500 acres. This is in accordance with the spirit of the resolution of the Reclamation Commission of December 23, 1913, as follows:

Resolved, That this Commission recommends to the Secretary of the Interior the approval of the construction of the proposed system for irrigating about 2,500 acres of land near the City of Lawton, Oklahoma, on condition that the owners of a sufficiently compact area enter into proper contracts for disposing in tracts averaging about ten acres of all in excess of 40 acres in each township and return the cost of construction under the terms of the Reclamation Act.

So far as appears from the record, the owners of this land have not as yet indicated the exact areas which they are willing to mortgage for this construction, but it is understood that this can be readily accomplished.

Restriction of Ownership: In the above resolution of December 23, it is to be noted that one of the conditions imposed is a restriction of the present landowners to 40 irrigable acres. Nothing has occurred to modify this action.

Ten-acre Tract: It is also to be noted that it is the opinion of the Commission as proposed and agreed by the landowners that all excess land should be sold in 10-acre tracts, the reason being that it is believed that success can be attained if the land ownership is in such small tracts that it will be necessary to intensively cultivate the soil, which, of course, involves the irrigation of it. Unless the ownership is thus restricted, there is doubt as to whether such intensive cultivation will follow, as there is always danger of return to dry farming under these climatic conditions.

Water Users Association: Articles of incorporation of a water users association were submitted for consideration of this office and on September 24, 1913, returned with suggestion that no further steps be taken until the Department determined definitely that the project would be undertaken.

Donation of Reservoir: Contract executed in behalf of the City of Lawton conveying to the United States reservoir rights in connection with the Lawton project was transmitted to the Department on June 1, 1914, but returned to this office to be held awaiting Congressional action on the Indian bill. The legal questions as to power of the City to do so and the effect of the bonded indebtedness of the city upon the donation of these reservoir rights, it is understood, have been considered by Judge King but the contract has not been submitted for Departmental approval pending action on the Indian bill. Judge King is expected back about August 10, 1914, when this matter will be considered by him and the contract submitted for Departmental consideration.

Building Distributing System: One of the conditions attached is that if the Government builds the main line canal to the irrigable lands, the owners thereof shall build the distributing system according to plans developed by the Reclamation Service but at their own expense. This is believed to be a desirable requirement

as the work can be done most economically by the landowners, using their own teams.

In the item in the Indian appropriation bill above referred to it is provided that—

the project shall include lateral construction for the Indian lands down to each legal subdivision thereof equal in area to the size of the farm unit for lands in private ownership.

No appropriation is made for constructing such lateral system. Presumably funds provided for such general purposes are available for the Indian Service to be utilized in building the distributing system; in this case the Indian Service will occupy the same position as owners of private lands.

Rights of Way: Right of way must be acquired across Fort Sill Military Reservation and also by donation across private lands. As yet the definite location of needed rights of way has not been made because this is dependent upon the position and area of the lands to be served. As soon as maps can be prepared, it will be necessary to have conveyance of this necessary right of way.

FURTHER ACTION

The steps now to be taken are as follows:

1. Indication by private landowners of the areas which they are willing to subscribe.
2. Selection of these areas in as compact a body as possible and with reference to the character of the soil, and its adaptability to irrigation.
3. Execution of agreements with relation to the particular tracts, providing for subdivision and sale of these.
4. Mapping of the rights of way. Before any considerable expenditures are made all rights of way should be acquired and all contracts which may be necessary with the city or the bondholders and the landowners, should be executed.
5. Donation of these rights of way.
6. Execution of contract between the water users association and the Secretary of the Interior.
7. Completion of contract with the city regarding use of the reservoir and with the bondholders, if necessary.
8. Completion and recording of all contracts or agreements.
9. Preparation of plans and specifications for the main canal.
10. Advertising and contracting for this work.
11. Completion of plans for laterals for distributing system.
12. Agreement with the landowners to build these within specified time.

RECOMMENDATION

In order to carry out the above program, it is recommended that the Commission be authorized to take up the work in about

the above named order, utilizing for this purpose the sum of not to exceed \$100,000, estimated for in communications of January 29, 1914.

For the Commission,

(Signed) F. H. NEWELL,
Director.

Recommendation approved August 3, 1914.

(Signed) FRANKLIN K. LANE,
Secretary.

OFFICE OF THE SECRETARY,
Washington, October 7, 1914.

THE PRESIDENT,
The White House.

SIR: I have determined that it is practicable and advisable to construct irrigation works in the vicinity of Lawton, Oklahoma, to water about 2,500 acres of semi-arid land at a cost of \$100,000, including main canals and laterals to each legal subdivision of land included therein.

It is recommended that the irrigation project shall be begun and that you shall, by direct order, approve the same.

Respectfully,

(Signed) FRANKLIN K. LANE,
Secretary.

The SECRETARY OF THE INTERIOR.

SIR: It is ordered that your recommendation that an irrigation project shall be begun in the vicinity of Lawton, Oklahoma, shall be, and the same is, hereby approved.

(Signed) WOODROW WILSON,
President.

OCTOBER 8, 1914.

DEPARTMENT OF THE INTERIOR,
Washington, March 7, 1917.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: October 7, 1914, you approved recommendation of this Department for the construction of a reclamation project near Lawton, Oklahoma, to water about 2,500 acres of semiarid land, at a cost of \$100,000.

The Reclamation Commission now advises me that it will be impossible to build the project for the amount originally estimated, but that it will probably cost \$160,000.

I communicated informally with Representative Ferris, and he with the local representatives of the water users association, who state that they are willing to have the project proceed at the increased cost, whatever it may be. I have therefore to ask that I be authorized to proceed with the Lawton project at the increased cost.

Cordially yours,

(Signed) FRANKLIN K. LANE,
Secretary.

The foregoing recommendation of the Secretary of the Interior, relative to construction of reclamation project near Lawton, Oklahoma, is hereby approved.

(Signed) WOODROW WILSON,
President.

21 March 1917.

PROVISION OF INDIAN DEPARTMENT APPROPRIATION ACT

[Extract from] An act making appropriations for the current and contingent expenses of the Bureau of Indian Affairs, for fulfilling treaty stipulations with various Indian tribes, and for other purposes, for the fiscal year ending June thirtieth, nineteen hundred and fifteen. (Act of August 1, 1914, 38 Stat. 582, 597, Public Law 160, 63rd Cong., 2d sess.)

* * * * *

SEC. 16 * * * That the Secretary of the Interior be, and he is hereby, authorized to contract for water rights for the irrigation of not to exceed six hundred acres of land in the Fort Sill

Indian School Reservation, in the State of Oklahoma, within the proposed Lawton reclamation project for the irrigation of not to exceed two thousand five hundred acres of Indian and private lands, upon the same terms and conditions as those prescribed for the acquisition of water rights for other lands to be irrigated by said project: *Provided*, That operation and maintenance charges shall not be assessed against said Indian land prior to the completion of the lateral system so as to provide for actual delivery of water thereto, and the project shall include lateral construction for the Indian lands down to each legal subdivision thereof equal in area to the size of the farm unit for lands in private ownership within said project. * * *

THE SECRETARY OF THE INTERIOR,
Washington May 31, 1917.

Hon. A. P. Davis,
Director and Chief Engineer,
U. S. Reclamation Service.

DEAR MR. DAVIS: Mr. Ferris called me up with relation to the matter referred to in this telegram and I told him that we would postpone the construction of the Lawton Project until after the war, provided the right we have to the water was continued until that time and the cost at that time would not be prohibitive. Will you please see that this is done.

Cordially yours,

(Signed) FRANKLIN K. LANE,
Secretary.

POSTAL TELEGRAPH
Washington, D. C., June 1, 1917.

RECLAMATION,
Denver, Colorado.

Directors Lawton Irrigation District request the Secretary of Interior to withhold approval of Lawton irrigation contract as Lawton desires to tender its water supply to War Department so long as War Department needs same. You are instructed to suspend all operations looking to construction Lawton Project until further orders.

(Signed) A. P. DAVIS,
Director and Chief Engineer.

June 4, 1917.

From: Director and Chief Engineer.
To: Chief of Construction, Denver, Colo.
Subject: Lawton Project, Oklahoma.

1. A few days ago I sent you a telegram about stopping preparation for the construction of the Lawton Project. This was inspired by word from the Office of the Secretary that the officers of the Lawton Irrigation District had requested that the contract be not signed, and that on a suggestion of Representative Scott Ferris the Secretary had agreed to this.

2. It seems that a large army post or training camp is about to be established which will require all of the water supply from the reservoir, and the people of Lawton believe that this is a better use of the water than irrigation. At any rate, it has been decided not to build the Lawton Project until further notice, and the contract is not to be executed.

3. According to my present information, the proper program is to cut off all expenses relating to the Lawton Project so far as the Reclamation Service is concerned until further orders.

(Signed) A. P. DAVIS,
Director and Chief Engineer.

LEWISTON ORCHARDS PROJECT

IDAHO

The Lewiston Orchards project was found feasible by the Acting Secretary on May 31, 1946, pursuant to the Reclamation Project Act of 1939. However, before the Secretary's report was submitted to Congress, the Congress specifically authorized construction of the project by the act of July 31, 1946 (60 Stat. 717).

BUREAU OF RECLAMATION, REGION I,
Boise, Idaho, December 3, 1945.

From: Regional Director, Region I, Boise, Idaho
To: The Commissioner, Bureau of Reclamation
Subject: Lewiston Orchards Project, Idaho.

1. *Transmittal.*—Herein is presented my report describing the contemplated development of the Lewiston Orchards project, Idaho. Additional supporting materials are presented in the appendix report on this project which is being transmitted separately. For urgent reasons developed below, I recommend that you present the report for appropriate departmental action with a view to securing congressional authorization for immediate construction of the project.

* * * * *

38. *Conclusions.*—Urgent need for the project exists to preserve improvement values in the Lewiston Orchards irrigation district, totaling nearly \$2,000,000; to permit continuance of crop production which at normal prices has a value exceeding a quarter of a million dollars annually; and to provide a healthful supply of water for nearly 3,000 people. The project will have numerous other benefits, including a substantial increase in the annual value of crops produced, the creation of new opportunities for part-time farming, and the preservation and increase of wealth contributing to the support of local business, the county, and the State. The plan presented herein has engineering feasibility and

full payment of reimbursable costs of the project is in prospect.

39. *Recommendations.*—It is recommended:

(a) That the following principal works and such subsidiary works as may be incidental thereto, which, together with existing works of the Lewiston Orchards Irrigation District not requiring reconstruction, constitute the Lewiston Orchards Project, be authorized to be constructed by the Bureau of Reclamation substantially in accordance with the plans set forth in this report and in the supporting Appendix Report on the Lewiston Orchards Project, with such modifications, omissions, or additions as you may find proper for carrying out the project to the end of providing irrigation and domestic water to the 3,430 acres now served by the Lewiston Orchards Irrigation District and of providing capacity in mains to permit eventual extension of irrigation and domestic water service by the district to the 348 acres of the project area adjoining the district lands on the northwest, to wit:

(1) Concrete bench flume to replace wooden flumes on Sweetwater Creek diversion canal,

(2) Concrete pipe siphon on Sweetwater Creek diversion canal to replace chute and siphon of inadequate capacity,

(3) Earth and rock-fill diversion dam on Webb Creek to replace timber crib structure,

(4) Steel pipe to replace wooden flumes on Webb Creek diversion canal,

(5) Steel pipe irrigation distribution system to serve 3,430 acres in Lewiston Orchards Irrigation District, with mains of adequate capacity to permit the eventual extension of service by the district to the 348 acres of the project area adjoining the district on the northwest.

(6) Transit pipe, domestic water distribution system to serve the same area, also with mains of adequate capacity to permit extension of service by the district to the adjoining acreage described, and

(7) Treating plant and clear water reservoir for domestic water system.

(b) That said Lewiston Orchards Project be authorized to be constructed, operated, and maintained in accordance with the Federal Reclamation Laws (Act of June 17, 1902, 32 Stat. 388, and acts amendatory thereof or supplementary thereto): *Provided*,

(1) That this report shall be deemed to satisfy the requirements of the Federal Reclamation Laws governing the submission to the President and the Congress of a finding of engineering feasibility;

(2) That water users shall be required to pay not more than the estimated maximum repayable amount of \$870,000 of the actual construction costs finally to be allocated to irrigation, such repayment to be made in the maximum repayment period and on the terms and conditions available under the provisions of subsection 9 (d) of the Reclamation Project Act of 1939;

(3) That water users shall be required to pay not more than

the estimated maximum repayable amount of \$540,000 of the actual construction costs finally to be allocated to domestic water, such repayment to be made in the maximum repayment period and in the terms and conditions available under the provisions of 9 (c) of the Reclamation Project Act of 1939;

(4) That the excess, if any, of actual construction costs finally allocated to irrigation and domestic water over the sums stated in (2) and (3) above, respectively, be nonreimbursable; and

(5) That the costs allocated to the irrigation system consist of the construction costs for the irrigation distribution system, 94 percent of the construction costs for works above the distribution system, and that part of the \$30,000 investigation cost determined by use of the ratio between construction costs for the irrigation system and total construction costs; and that costs allocated to the domestic water system consist of the construction costs of the domestic water distribution system and treating plant, six percent of the construction costs for works above the treating plant and distribution system, and the balance of the \$30,000 investigation cost not allocated to the irrigation system.

(c) That, inasmuch as the domestic water system is an essential accompaniment to the irrigation system and would utilize the same water supply, reimbursable funds used for construction of the treating plant, clear water reservoir, and distribution system for domestic water shall not carry reimbursable interest charges.

(d) That the Lewiston Orchards Irrigation District or other water users' organization or organizations having adequate authority under the laws of Idaho to contract with the United States for the operation and maintenance of the project works and for the repayment of construction costs on the terms indicated in this report be recognized as the appropriate representative of the project water users.

(e) That the contract between the United States and the district provide, among other things, substantially as follows:

(1) That annual charges for irrigation levied against each benefited owner of land within the district, including charges both for repayment of construction costs and for operation and maintenance of the project, be determined on the basis of two components: a uniform charge per acre, and a service charge for each operating unit; and that the total charges thus determined be as nearly proportional as practicable to the maximum repayment ability of operators of representative sized units established in this report; and

(2) That the district, subject to approval by the Government, may extend the irrigation and domestic water systems constructed by the United States to provide service on the 348 acres of the project area adjacent to the present district lands on the north-west at such time and under such terms as may be mutually agreed upon by the district and the owners of land in that adjacent area.

(Signed) R. J. NEWELL,
Regional Director.

BUREAU OF RECLAMATION,
Washington, February 28, 1946.

THE SECRETARY OF THE INTERIOR.

SIR: I submit herewith my report on the Lewiston Orchards project, Idaho. The proposed project involves the reconstruction of a large part of the present water system serving the domestic and irrigation needs of the Lewiston Orchards irrigation district and the construction of needed additions to that system. The present water system of the district is seriously deteriorated and requires immediate reconstruction to meet the irrigation needs of the district and to assure and safeguard the public health. The project will furnish water to 3,430 acres of land already irrigated in the district. Frequent breakdowns have reduced water supplies during appreciable periods of time as much as 85 percent, and the entire supply is constantly threatened by failure of the deteriorated facilities. It will also ultimately serve an additional 348 acres of new land and supply safe domestic water to about 4,000 persons. In July 1945 the 2,939 people in the project area were obtaining their domestic water supply from the present water system. The Idaho Department of Public Health has classified the water as unsatisfactory for domestic use, and many of the residents have made it their practice to haul drinking water from other sources.

The project has engineering feasibility and is economically sound. It has a favorable ratio of direct benefits to costs of 5.7 to 1, based upon 1940 costs estimated at \$997,000. Although the project would be feasible on the basis of 1940 costs, the rising costs since that date make it desirable to submit the report to the Congress for special authorization under section 9 (a) of the Reclamation Project Act of 1939. Even under present costs, which are about 47 percent higher than in 1940, there is a favorable ratio of benefits to costs of 3.9 to 1.

I recommend that the Lewiston Orchards project, as described in the attached report be authorized to be constructed, operated, and maintained by the Bureau of Reclamation substantially in accordance with plans set forth in the attached report of the regional director dated December 1945, with such modification as the Commissioner of Reclamation, with your approval, may find proper.

I recommend that you adopt this report as your proposed report on the Lewiston Orchards project and that you authorize me in your behalf to transmit copies of this letter and of the attached proposed report to the affected State of Idaho and to

the Secretary of War in accordance with the requirements of Section 1 of the Flood Control Act of 1944.

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved March 5, 1946.

(Signed) OSCAR L. CHAPMAN,
Acting Secretary of the Interior.

BUREAU OF RECLAMATION,
Washington, May 24, 1946.

The SECRETARY OF THE INTERIOR.

SIR: I transmit herewith my report on the Lewiston Orchards project, Idaho.

The project includes the reconstruction of a domestic and irrigation water system now inadequately serving the Lewiston Orchards irrigation district, and the construction of certain needed additions to that system. Water would be furnished to 3,430 acres of land in the district, and, ultimately, an additional 348 acres of new land would be served. Domestic water would be provided for 4,000 persons.

On March 5, 1946, the Acting Secretary of the Interior approved the plan set forth in my letter of February 28, 1946, and adopted that document as the Secretary's proposed report. Copies of the proposed report were duly transmitted to the Secretary of War, and to the Governor of Idaho, pursuant to the requirements of section 1 of the Flood Control Act of 1944 (58 Stat. 887). Copies were sent also to the Federal Power Commission, the Corps of Engineers, and the Department of Agriculture. The written views of each have been received and are attached to the report and accompanying papers.

The Assistant Secretary of the Department of Agriculture, commenting on the report, raised questions concerning the engineering and agricultural phases of the project. First, he believes that a farm delivery of 2.2 acre-feet per acre per year would be restrictive to the cropping systems on the project, and that at least 3 acre-feet per acre is desirable. On the other hand, I reiterate that the farm delivery, summarized in the report, is based on reliable methods of estimating consumptive uses plus a liberal allowance for waste and seepage. Furthermore, it is somewhat in excess of what long-time irrigators in the project area believe adequate for satisfactory irrigation. The 2.2 acre-feet per acre, which is twice the metered delivery, is, in our opinion, adequate. Second, he raises the question whether reservoir sedimentation has been taken into account in our water-supply studies. Such sedimentation has been taken into account, and our water-supply

studies show that additional storage will not be needed, because of the savings in water losses expected from the reconstructed system. Third, he mentions that repayment calculations are based on 3,430 acres, the area of the district, and not on the 3,360 acres which are irrigable. This was considered in some detail, and it was concluded that exclusion of the small area of nonirrigable land in this instance would be impracticable and would create real hardship, for the small acreage of nonirrigable land is interspersed among the irrigable lands of the highly developed units. These units have paid-up water rights. For this reason, nondelivery of water to the small tracts of nonirrigable land would be difficult to achieve.

I recommend that the project be authorized for construction as set forth in the attached report. If you concur in my recommendations, please so indicate by signing the attached letter to the President.

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

OFFICE OF THE SECRETARY,
Washington, May 31, 1946.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: Attached is my report on the Lewiston Orchards project, Idaho. I transmit it to you pursuant to section 9(a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

The Commissioner of Reclamation proposes to reconstruct a seriously deteriorated domestic and irrigation water system now inadequately serving the Lewiston Orchards irrigation district near Lewiston, Idaho, and to construct certain needed additions to that system. I concur in the recommendations of the Commissioner, as I find that the plan is feasible from an engineering standpoint, that it is economically justified, and that repayment of most of the costs may be anticipated.

The plan for the project has been prepared under the sponsorship of the Bureau of Reclamation, and has been reviewed by the several agencies of the Department of the Interior. The report has been reviewed by the affected State of Idaho and by the Secretary of War, in accordance with the requirements of section 1(c) of the Flood Control Act of December 22, 1944 (58 Stat. 887). Their written views are attached.

I shall appreciate having your advice concerning the relation of this proposed project to your program before I transmit the report to the Congress for its consideration and appropriate action

in accordance with the provisions of the Reclamation Project Act of 1939.

Sincerely yours,

(Signed) OSCAR L. CHAPMAN,
Acting Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, July 9, 1946.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This will acknowledge receipt of your letter dated May 31, 1946, addressed to the President submitting the proposed report on the Lewiston Orchards project, Idaho, and the draft of covering letter to the Speaker of the House of Representatives subsequently submitted.¹ While it is noted that the cost benefit ratio is determined by the questionable method of comparing gross returns with net cost, I am authorized by the Director of the Bureau of the Budget to advise you that there would be no objection to the submission of the report to Congress.

Sincerely yours,

(Signed) L. C. MARTIN,
Assistant Director, Estimates.

LEWISTON ORCHARDS PROJECT AUTHORIZED

An act to authorize the Secretary of the Interior to construct the Lewiston Orchards project, Idaho, in accordance with the Federal reclamation laws. (Act of July 31, 1946, 60 Stat. 717, Public Law 569, 79th Cong., 2d sess.)

* * * That for the purposes of irrigating lands and for purposes incidental thereto, there is hereby authorized to be constructed, operated, and maintained the Lewiston Orchards project, Idaho, substantially in accordance with the recommendations of the regional director of the Bureau of Reclamation, region numbered I, in his report dated December 3, 1945, as concurred in by the Commissioner of Reclamation and the Secretary of the Interior: *Provided, That*, notwithstanding any recommendations to

¹ This letter was to have accompanied a copy of the report to the Speaker of the House, advising him that the report was being submitted for consideration by the Congress. It was not sent to him because no occasion for sending it arose. The Congress took action before the report was officially submitted.

the contrary contained in said report, all costs of said project allocated to irrigation and all costs of said project allocated to municipal water supply shall be reimbursable under the Federal reclamation laws but within repayment periods to be fixed by the Secretary of the Interior and not to exceed fifty years.

SEC. 2. There are hereby authorized to be appropriated out of any moneys in the Treasury not otherwise appropriated, such sums as may be required for the purposes of this Act.

UNITED STATES DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D. C., September 26, 1947.

MEMORANDUM

To: Secretary J. A. KRUG
From: Commissioner
Subject: Changes in description of features—Lewiston Orchards Project.

In connection with the Lewiston Orchards Project, Idaho, the Construction Engineer has undertaken the detailed review of the project features as the first necessary step toward the commencement of construction. The result of this review makes it appear desirable to alter in some respects the description of the principal features as they appear in the Regional Director's report of December 3, 1945, which is the basic authorizing document (Senate Document No. 247, 79th Congress, 2d Session), and in the repayment contract which was executed on behalf of the United States on September 10, 1947.

The repayment contract and the basic authorizing document provide for modifications in design or location of works or the elimination or addition of works where this is found necessary or desirable by the Secretary, the limitation being only that the changes must be in keeping with the principal objective for which the project was authorized. The changes proposed by the Construction Engineer are these:

1. The construction of diversion works and related sand trap and headworks on the Sweetwater diversion canal. The authorizing document describes only the concrete bench flume on Sweetwater Creek. It became evident, however, in the course of negotiations on the contract that the existing headworks and the sand trap and related diversion works were in need of early replacement. Accordingly, the contract was framed so as to cover the replacement of the concrete bench flume, headworks, and sand trap. The diversion works were not expressly mentioned, though they are in actual fact but a part of the headworks and sand trap.

2. The use of 30-inch precast concrete pipe to replace the present Webb Creek diversion flume. The authorizing document provided for the use of steel pipe.

3. The use of precast concrete pipe from Reservoir "A" to the filtration plant. The original plan called for the use of steel pipe.

All the changes suggested by the Construction Engineer have the approval of the Chief Engineer and the Regional Director. The District's board of directors has also considered and approved the changes. It is my conclusion that the changes are desirable and that the making of the changes is permissible under the provisions of the authorizing document and the repayment contract.

It is possible that as construction proceeds other modifications of a similar character will be found desirable. So long as these changes will not result in increasing the then official estimate of project cost, and so long as the changes may properly be made under the provisions of the authorizing document and the repayment contract, I believe that it will be of advantage to have delegated to the Regional Director authority to approve the changes. I recommend that you approve the changes above described and that you delegate to the Regional Director authority to approve future changes within the limitation herein stated.

For your information there are attached ² copies of the Construction Engineer's letter of August 5 to the District, the District's reply of August 7, and the Chief Engineer's letter of September 3. These should be returned to our files when action has been taken on this matter.

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved September 29, 1947.

(Signed) WILLIAM E. WARNE,
Assistant Secretary of the Interior.

² Excluded from this publication.

LITTLE WOOD RIVER PROJECT

IDAHO

The Little Wood River Project was approved by the Secretary of the Interior on February 13, 1956, and authorized by Congress on August 6, 1956 (70 Stat. 1059, Public Law 993, 84th Cong., 2d sess.).

UNITED STATES DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D. C., August 23, 1955.

THE SECRETARY OF THE INTERIOR.

SIR: This is my proposed report on the potential Little Wood River Project, Idaho. It is based on and includes the accompanying report of the Regional Director, Bureau of Reclamation, Boise, Idaho.

The project is located in the Little Wood River Basin, Blaine County, Idaho. The lands to be served surround the town of Carey and form an area about 2 miles wide and 12 miles long.

The proposed development consists of the enlargement of the existing Little Wood River Reservoir from the present capacity of 12,100 acre-feet to a total capacity of 30,000 acre-feet. This would be accomplished by increasing the height of the existing dam about 45 feet. The existing diversion and distribution facilities in the project area would be utilized without change.

The additional storage water made available would be used as a supplemental irrigation supply for 9,550 acres of irrigable lands which experience water shortages of varying degrees after July of each year. Lack of late-season water limits the type and quantity of crops produced and thus restricts income which could be increased if a more adequate water supply were made available. This has a depressing effect in this semiarid area where the economy is entirely dependent upon agriculture.

The increased reservoir storage capacity, if operated on a forecast basis, would provide flood control benefits to downstream lands. By proper operation of the reservoir it is expected that the

Carey area flood problem, except in extraordinary circumstances, will virtually be eliminated. Also, to the extent possible as indicated by the Regional Director, provision will be made for the preservation and propagation of fish and wildlife.

Investigations in the project area indicate strong and widespread interest in favor of the project on the part of individual farmers and representatives of the irrigation organizations. The project would be a worth-while investment for the Nation in that the total benefits to be derived exceed the associated costs by a ratio of 2.52 to 1.0 when based on a 50-year period of analysis. On a 100-year period of analysis this ratio becomes 3.19 to 1.0. For both periods of analysis, the ratio of direct benefits only to costs would be respectively 1.98 to 1.0 and 2.52 to 1.0.

The estimated cost of the proposed construction based on January 1955 prices, which are essentially the same as current prices, is \$1,880,000. Annual operation, maintenance, and replacement costs for the new facilities to be paid by the water users are estimated at \$3,900.

The \$1,880,000 construction cost is allocated to irrigation and flood control in the respective amounts of \$1,552,000 and \$328,000. The flood control allocation, in accordance with national policy, is considered as nonreimbursable. The \$1,552,000 allocated to irrigation is reimbursable and our studies indicate that the water users probably will be able to repay this amount in 40 years. No development period is required since the individual farms are already improved for irrigation and the additional water can be fully utilized when made available.

I concur in and adopt the recommendations of the Regional Director as set forth in Part IX of his report.

Subject, of course, to consideration of future comments, I recommend that you approve and adopt this report as your proposed report on the Little Wood River Project, Idaho, and that you authorize me in your behalf to transmit copies to the States of the Columbia River Basin and to the Secretary of the Army in accordance with requirements of the Flood Control Act of 1944 (58 Stat. 887), to the State of Idaho for the views and recommendations of the head of the agency exercising administration over the wildlife resources of that State, in accordance with provisions of the Act of August 14, 1946 (60 Stat. 1080), and to other interested Federal agencies for comments. Upon receipt of replies in response to these transmittals, copies of the report, together with comments which are received will be submitted for your further consideration and appropriate action.

Respectfully,

(Signed) W. A. DEXHEIMER,
Commissioner.

Approved and adopted: September 27, 1955.

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

UNITED STATES DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D. C., January 24, 1956.

THE SECRETARY OF THE INTERIOR.

SIR: This is my report on the Little Wood River Project in Idaho. It is based on and includes the proposed report on this project which you approved and adopted on September 27, 1955.

Copies of your proposed report were transmitted to States of the Columbia River Basin and to the Secretary of the Army on October 4, 1955, in accordance with section 1(c) of the Flood Control Act of 1944 (58 Stat. 887) and to the State of Idaho for comments from the head of the agency exercising administration over the wildlife resources of that State in accordance with the provisions of the Act of August 14, 1946 (60 Stat. 1080). Copies of the report were also furnished to agencies represented on the Inter-Agency Committee on Water Resources for their review and comments. Comments have been received from all States and agencies to which the report was sent, and copies are attached.

As the comments received are all favorable, it does not appear that revision of your proposed report as a result of the review by the various agencies is necessary. In particular, the officials of the State of Idaho advise that they heartily recommend the project for early authorization and construction.

In the interest of clarification, however, it is believed that the following understanding regarding recommendation (c) contained on page 45 of the Regional Director's report should be recorded: The relative rights of the State of Idaho's Fish and Game Department and of water users under the Little Wood River Project or their organizations appear to be in dispute. These should, as the Regional Director suggested on page 22 of his report, be clarified. Such clarification should be had in some formal manner effective under Idaho law. It is not intended that this report or construction of the project (which is feasible regardless of the outcome of the dispute) shall aid or prejudice any party to the dispute, and recommendation (c) is not intended as an indication that the Department should accept for itself, or for any of its officers or employees, any responsibility for determining, directly or indirectly, what the rights of the parties are or that there should be imposed on the water users any obligation with respect to such rights that does not exist under the laws of Idaho. The recommendation that "the reservoir be operated * * * in a manner not inconsistent with such laws (i.e., laws of the State of Idaho) to preserve existing fish and wildlife resources in Carey Lake or within the Little Wood River Project area," is not intended to indicate that it is the position of the Department of the Interior that water available beyond that obtained under

rights established pursuant to Idaho law should be used primarily either for irrigation or the preservation of fish and wildlife resources.

Accordingly, I recommend that you approve and adopt this report as your report on the Little Wood River Project, Idaho, and that you transmit it together with the attached comments to the President and subsequently to the Congress in accordance with the Reclamation Act of 1939.

Respectfully,

(Signed) E. G. NIELSEN,
Acting Commissioner.

Approved and adopted: February 13, 1956.

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

UNITED STATES DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., February 13, 1956.

THE PRESIDENT,
The White House,
Washington 25, D. C.
(Through: The Bureau of the Budget).

MY DEAR MR. PRESIDENT: My report on the Little Wood River Project, Idaho, is transmitted herewith pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

The Little Wood River Project, entirely within Blaine County, Idaho, involves raising the existing Little Wood River Dam 45 feet to increase reservoir storage from 12,100 to 30,000 acre-feet. This increased storage would regulate the flows of the Little Wood River to provide supplemental irrigation water to 9,550 acres in the Little Wood River Valley in the vicinity of the town of Carey, which currently experience water shortages of varying degree after July of each year. No construction or rehabilitation of the existing distribution system is contemplated. The project also would eliminate much of the damage from the frequent floods that occur.

The estimated project cost is \$1,880,000, of which \$328,000 is allocated to flood control as a nonreimbursable cost and the balance of \$1,552,000 is allocated to irrigation. It is anticipated that the entire \$1,552,000 allocated to irrigation would be repaid by the water users within a 40-year period. They would also pay the annual operation, maintenance and replacement costs of \$3,900.

Studies indicate that estimated benefits exceed estimated costs by a ratio of 2.52 to 1.00 based on a 50-year period of analysis. Interested agencies, both local and national, have expressed approval of the general plan.

The report has been transmitted to officials of the States of the Columbia River Basin and to the Secretary of the Army for their consideration and recommendations as required by the provisions of section 1 (c) of the Flood Control Act of 1944 (58 Stat. 887). It was also sent to the State of Idaho for the comments of the agency exercising administration over the wildlife resources of the area involved as required by provisions of the Act of August 14, 1946 (60 Stat. 1080), and to the Departments of Agriculture, Commerce, Labor, and Health, Education and Welfare, and the Federal Power Commission in accordance with interagency agreements. Favorable comments have been received from all reviewing agencies.

I recommend that the Little Wood River Project be authorized. I shall appreciate having advice concerning the relationship of the Little Wood River Project to your program before I transmit the report to the Congress for its consideration and appropriate action in accordance with the provisions of the Reclamation Project Act of 1939.

Sincerely yours,

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington 25, D. C., March 7, 1956.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This is in reply to your letter of February 13, 1956, submitting your report on the Little Wood River project, Idaho, and requesting advice as to its relationship to the program of the President.

This project would involve the raising of the existing Little Wood River Dam thereby increasing the capacity of the reservoir from 12,100 to 30,000 acre-feet to provide a supplemental water supply for 9,550 acres of presently irrigable land.

The estimated cost, based on January 1955 price levels, is \$1,880,000 of which \$328,000 allocated to flood control would be nonreimbursable, and \$1,552,000 allocated to irrigation would be reimbursable, an average cost of about \$162 per irrigable acre. The stated benefit-cost ratios on a 50-year period of analysis are 2.52 using total benefits and 1.98 considering only the direct benefits. Additional information indicates that the water users would have an incremental repayment capacity of about \$4.42 per acre annually which compares with an estimated \$4.39 per acre annual requirement to repay the reimbursable project construction cost in 40 years as well as the annual operation, maintenance, and replacement charges. The project area is presently improved

for irrigation and the proposed supplemental water supply could be fully utilized without additional distribution works or a development period.

Comments by concerned Federal agencies and by interested State and local agencies either support the proposed project or offer no objections. The Corps of Engineers states that the tentative allocation of project costs to flood control, amounting to \$328,000, appears to be reasonable, but expresses the belief that the operation and maintenance costs should be capitalized on the basis of the 50-year period used for amortization of the project costs rather than the 100-year period used in the analysis. The Bureau of the Budget concurs in these expressed views of the Corps of Engineers.

Subject to your consideration of the above comment, the Bureau of the Budget would have no objection to the submission of your proposed report to the Congress. No commitment, however, can be made at this time as to when any estimate of appropriation would be submitted for construction of the project, if approved by the Congress, since this would be governed by the President's budgetary objectives as determined by the then prevailing fiscal situation.

It is requested that a copy of this letter be included with your report when it is submitted to the Congress.

Sincerely yours,

(Signed) PERCY RAPPAPORT,
Assistant Director.

UNITED STATES DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., March 30, 1956.

Hon. SAM RAYBURN,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: My report on the Little Wood River Project, Idaho, is transmitted herewith pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187). It contains favorable recommendations which augment the information contained in our January 11, 1956, letter to the Chairman, Committee on Interior and Insular Affairs, House of Representatives, commenting on H. R. 7850, a bill "To authorize the Secretary of the Interior to construct, operate, and maintain the Little Wood River reclamation project, Idaho."

The report presents a plan for raising the height of the existing Little Wood River Dam 45 feet to provide an additional water supply to 9,550 currently inadequately irrigated acres, in the vicinity of Carey, Blaine County, Idaho. These lands suffer water shortages after July of each year. Also, proper operation of the enlarged reservoir would afford needed flood control benefits to

downstream lands. The estimated cost of the project based on January 1955 price levels is \$1,880,000. Of this amount \$328,000 is allocated to flood control which is considered nonreimbursable and \$1,552,000 to irrigation which is considered reimbursable and probably will be repaid in a 40-year period.

Copies of this Department's proposed report were transmitted to the States of Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming and to the Secretary of the Army for their views and recommendations in accordance with the provisions of section 1 of the Flood Control Act of December 22, 1944, and to the agencies represented on the Inter-Agency Committee on Water Resources for their information and comments. All States and Federal agencies commented and copies of the comments are enclosed with the report.

The report and copies of all comments received were transmitted to the President. Enclosed is a copy of the letter of comments of March 7, 1956, from Assistant Budget Director Percy Rappaport, in which he expresses preference for a slightly modified approach to determination of the flood control allocation. If Budget's suggestion was followed the flood control allocation would be decreased from \$328,000 to \$318,000 while the irrigation allocation would be increased in like amount. In either event the water users' repayment ability would be adequate to repay the capital costs allocated to irrigation in a 40-year period.

Sincerely yours,

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

An act to authorize the Secretary of the Interior to construct, operate, and maintain the Little Wood River reclamation project, Idaho. (Act of August 6, 1956, 70 Stat. 1059, Public Law 993, 84th Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the principal purposes of improving the irrigation water supply of approximately ten thousand acres of land in Blaine County, Idaho, and assisting in the control of floods, the Secretary of the Interior is authorized to undertake an enlargement of the Little Wood River Reservoir and to operate and maintain the same in accordance with Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto). Any contract entered into under section 9, subsection (d), of the Reclamation Project Act of 1939 (53 Stat. 1187, 1193; 43 U. S. C. 485h) for payment of those portions of the costs of constructing, operating, and maintaining the Little Wood River project which are properly allocable to irrigation and which are assigned to be paid by the contracting organization shall provide for the repayment of the construction cost over a period of not more than forty years or as near thereto as is consistent with the adoption and operation of a variable payment formula which, be-

ing based on full repayment within the period stated under average conditions, permits variance in the required annual payments in the light of economic factors pertinent to the ability of the organization to pay.

SEC. 2. The Secretary is authorized to construct minimum basic public recreational facilities in connection with the Little Wood River project and to enter into appropriate arrangements for the operation and maintenance of the same by a State or local agency or organization. The cost of such facilities shall be nonreimbursable and nonreturnable under the reclamation laws.

SEC. 3. (a) The Secretary may make such reasonable provision in the works of the Little Wood River project as, upon further study in accordance with section 2 of the Act of August 14, 1946 (60 Stat. 1080, 16 U. S. C. 661a), he finds to be required for the preservation and propagation of fish and wildlife. An appropriate portion of the construction cost of the project shall be allocated as provided in said Act and it, together with the portion of the construction cost allocated to flood control and the portions of the operation and maintenance costs allocated to these functions or the capitalized value of the equivalent thereof, shall be nonreimbursable and nonreturnable under the reclamation laws.

(b) So far as the Secretary finds the same to be consistent with safety and with efficient operation or the primary purpose of the Little Wood River project, the project waters in the project area shall be open to free public use for lawful hunting and fishing purposes, and free access to the waters for those purposes shall be assured.

(c) Little Wood River Reservoir shall be operated in accord with water rights, under decree or permit, which are valid under the laws of the State of Idaho, but the Congress, taking cognizance of the need for clarification of certain of these rights in some formal manner effective under Idaho law, particularly as between the Fish and Game Department of said State and the water users under the Little Wood River project or their organizations, does not by this declaration accept for or impose upon the United States, its officers or employees any responsibility for determining the correctness of such claims of right and does not, either by the enactment of this Act or by any action taken pursuant thereto, intend to aid or prejudice the claims of any party to a dispute with respect thereto or to impose upon any party to a contract entered into under this Act any obligation with respect to such rights that does not exist under the laws of the State of Idaho or to require that water, other than that which is available under established rights, shall be used primarily either for irrigation or for the preservation of fish and wildlife resources.

SEC. 4. There are hereby authorized to be appropriated for construction of the Little Wood River project \$1,880,000 plus such amounts, if any, as may be required by reason of changes in construction costs as indicated by engineering cost indexes applicable to the types of construction involved therein and, in addition, such amounts as may be required to operate and maintain said project.

LOWER YELLOWSTONE PROJECT

MONTANA-NORTH DAKOTA

The Lower Yellowstone project, originally called Fort Buford project, was authorized by the Secretary on May 10, 1904, pursuant to the Reclamation Act of 1902; it was examined and reported upon by a Board of Army Engineers and approved by the President on January 5, 1911, in accordance with the act of June 25, 1910 (36 Stat. 836).

BILLINGS, MONTANA,
April 23, 1904.

Mr. F. H. NEWELL,
Chief Engineer, United States Geological Survey.

SIR: We have examined the project above Ft. Buford on Yellowstone River, and have to report as follows:

The project as surveyed contemplates the diversion of Yellowstone River about two miles above Glendive, and the construction of about 82 miles of canal to cover a large tract of fine land lying along the lower Yellowstone in Montana and North Dakota.

The first twenty miles of this line is mostly heavy work, and we are of the opinion that the cost of the project would exceed \$30 per acre, a price which we consider as the maximum at which the land would readily settle, under the provisions of the reclamation act.

It appears, however, that a lower line, diverting about 20 miles further east and covering less acreage, could be constructed at a less cost per acre, and would bring the price within a figure that could readily be obtained, and would cover as much land in North Dakota as the higher line. The existing surveys show elevations by which the position of the lower line can be approximated at any point, and we are of the opinion that at least 40,000 acres of good land can be irrigated by the system suggested, and that its cost will not much exceed twenty-five dollars per acre. We have, accordingly directed Mr. F. E. Weymouth to at once inaugurate surveys for the lower line, by which more definite figures can be made available early in June.

The minimum flow of the Yellowstone River is far in excess of the water supply required by this project.

The lands are excellent, and about one-third are vacant public land, one third are in possession of the Northern Pacific Railroad Company, and one-third are in private ownership. The private owners have indicated with practical unanimity their desire to purchase water rights from the government at twenty-five to thirty dollars per acre.

We recommend that the proper officials of the Northern Pacific Railroad Company be requested to enter into an agreement to subdivide the company lands which lie under the proposed canal into tracts not exceeding 160 acres, and to place upon them a nominal price that will insure the disposal in separate holdings of such tracts. Without such a definite binding agreement, we do not consider the project feasible.

After this agreement is secured, we recommend that the Honorable, the Secretary of the Interior be requested to give his preliminary approval of the project, and that the sum of \$1,200,000 be set aside in the Reclamation fund for its construction.

Respectfully submitted.

(Signed) A. P. DAVIS,
J. H. QUINTON,
B. M. HALL,
Consulting Board.

UNITED STATES GEOLOGICAL SURVEY,
May 7, 1904.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: Under the terms of the reclamation act of June 17, 1902, and instructions from you, surveys have been made in North Dakota and adjacent portions of Montana.

The only feasible project yet discovered in North Dakota is that which involves the reclamation of land in the extreme western part of the State between the Missouri and Yellowstone Rivers. To reach this land water must be diverted from the left bank of Yellowstone River in the State of Montana, and carried along the banks of the stream, irrigating a strip of land in Montana, and the flats in North Dakota.

The diversion from Yellowstone River will be very expensive, but the surveys made show that lands can be reclaimed at a cost which will probably not exceed \$30 per acre. This cost is considered to be the maximum at which the lands can be readily settled under the provisions of the reclamation act.

A Board of Engineers, consisting of Messrs. A. P. Davis, J. H. Quinton and B. M. Hall have reported to the Chief Engineer, recommending that alternative details be considered, and

that pending the completion of these, and of negotiations with the people concerned, a definite allotment to the project be made.

About one-third of the lands which may be irrigated are vacant, one-third are believed to be still owned by the Northern Pacific R.R. Co., and one-third in private ownership. The officials of the N. P. R. R. Co. have expressed informally their willingness to dispose of the land at a minimum price, in small tracts, to actual settlers, under the terms of the reclamation law; the other private owners have indicated their desire to purchase water rights at \$25 to \$30 per acre. These details should be satisfactorily arranged before construction is begun, but it is believed that suitable arrangements can be made.

In view of the present situation, I respectfully recommend that the sum of \$1,200,000 be set aside in the reclamation fund for the construction of the Ft. Buford project, if satisfactory arrangement can be made with the owners of lands and water rights, and the details now in the hands of the engineers be properly concluded.

Very respectfully,

(Signed) CHAS. D. WALCOTT,
Director.

OFFICE OF THE SECRETARY,
Washington, May 10, 1904.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: I have before me your letter of the 7th inst. in which you informed me that, under the act of June 17, 1902—32 Statutes, 388—surveys have been made in North Dakota and adjacent portions of Montana, that the only feasible project yet discovered is that involving the reclamation of land in the extreme Western part of the State between the Missouri and Yellowstone Rivers, and that to reach the land, water must be diverted from the left banks of the Yellowstone River in Montana, and carried along the banks thereof, irrigating a strip of land in Montana and the flats in North Dakota.

It appears that the surveys show that the lands can be reclaimed at a cost of not to exceed \$30.00 per acre, which cost is considered to be the maximum at which the lands can be readily settled under the reclamation act.

You have reported that about one-third of the lands which may be irrigated are vacant, one-third in private ownership and one-third believed to be still owned by the Northern Pacific Railroad Company.

Your recommendation is that the sum of \$1,200,000 be set aside from the reclamation fund for the construction of the Fort Buford Project, if satisfactory arrangements can be made with the own-

ers of land and water rights and the details now in the hands of the engineers can be properly concluded.

In compliance with your recommendation, I hereby set aside the sum of \$1,200,000 or so much thereof as may be necessary from the sum provided by the Act mentioned, for use in the construction of the Fort Buford Project, subject to the conditions you have set forth.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

MANCOS PROJECT

COLORADO

The Mancos project was found feasible by the Secretary on October 21, 1940, and approved by the President on October 24, 1940, under the terms of the Water Conservation and Utilization Act of August 11, 1939, as amended. Expansion of construction activities on the project as an aid in the production of needed agricultural products was approved by the President on December 20, 1944.

THE SECRETARY OF THE INTERIOR,
Washington, October 21, 1940.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: In accordance with the requirements of the act of August 11, 1939 (53 Stat. 1418), as amended, I submit this report on the Mancos irrigation project in Montezuma County, Colorado, and request your approval of the findings and certifications contained herein.

PROJECT PLAN

The proposed work involves the construction of a storage reservoir on Jackson Gulch, about four miles north of the town of Mancos, an inlet canal to take water from the West Mancos River and deliver it to the reservoir, and an outlet canal to which water will be released from the reservoir and returned to the river. The diversion and distribution system for the project lands has already been constructed. The dam will be an earth-fill structure, 130 feet high above the stream bed and 1,930 feet long across the crest. The inlet canal will be of 250 second-feet capacity and approximately three miles in length. The outlet canal will be of 200 second-feet capacity and less than three miles long. The reservoir back of the dam will have a capacity of 10,000 acre-feet.

The project lands, comprising approximately 10,000 acres, are situated in the valley along the Mancos River near the town of Mancos. The Mancos Valley, one of the oldest irrigated sections in western Colorado, has been settled for over sixty years, but many years ago the economic limit of settlement was fixed by the unregulated water supply. At present it is practicable to raise only some grain and forage crops, although the soil and climate are adapted to the growth of many other varieties. The dependable water supply which would be provided by construction of the project would furnish protection from drought and permit more diversified farming, thus stabilizing the agricultural industry in this community.

A new water supply for the Mesa Verde National Park is urgently needed. The present supply, which is from a deep well, is not satisfactory as the water is hot and must be cooled and treated to make it fit for use. The demand for water is constantly increasing and the park is becoming each year more popular. It is now planned to build a pipe line of 150 gallons per minute capacity, with an approximate length of twenty-one miles, to take water from the Jackson Gulch reservoir to the National Park headquarters. Approximately 120 acre-feet of the reservoir storage will be allocated to the Park Service, but the construction of the pipe line is not included as a part of the Mancos irrigation project.

PARTICIPATION OF FEDERAL AGENCIES

It is proposed that the Bureau of Reclamation will construct the dam, reservoir, inlet canal, and outlet canal. The present plan, subject to change, is that the Bureau also will operate the irrigation works after they are built and negotiate contracts with the water users for the repayment of construction charges. The Department of Agriculture plans to make a detailed study of the agricultural pattern of the project to determine the part it can take in the rehabilitation of the area. It also plans to acquire and develop lands and to take other action which is indicated by the study to assist in accomplishing such adjustments as are shown to be necessary. The National Park Service expects to participate in the construction program by making available a Civilian Conservation Corps camp which would be used on the construction of the dam when suitable conditions permitted, and at other times on the installation of the pipe line. The Work Projects Administration and the Civilian Conservation Corps are expected to provide most of the labor and a relatively small amount of materials, supplies, and equipment. A report to you from the Work Projects Administration on the extent of its proposed participation is enclosed. The Department of Agriculture has advised that its proposed participation is discussed in a letter to me dated September 19, 1940, and that this letter, a copy of which is enclosed, may be used as its report to you. Until appropriations are made to the Department of Agriculture for its participation, it is planned that allocations from appropriations made under the authority

of the act of August 11, 1939 (53 Stat. 1418) will be made to the Bureau of Reclamation, and that the Department of Agriculture will be reimbursed for services by the Bureau of Reclamation through transfers or advancement of funds from the allocations.

ESTIMATED COST

The total estimated cost of the project is \$1,600,000, of which \$680,000 is expected to be obtained from appropriations made under the authority of the act of August 11, 1939, and the amendments thereto, and \$920,000 through work accomplished by the Work Projects Administration or the Civilian Conservation Corps, or both. The construction of works by the Bureau of Reclamation is estimated to cost \$1,475,000, of which approximately \$600,000 is expected to be spent on the dam, reservoir and appurtenant works from appropriations made under the authority of the act of August 11, 1939, and its amendments. The program of the Department of Agriculture is estimated to cost \$125,000. A tabulation giving the estimated breakdown of expenditures is attached. Out of the \$3,500,000 made available by the Interior Department Appropriation Act of 1941, it is estimated that \$200,000 will be needed for work to be accomplished in the fiscal year 1941.

ALLOCATION OF COSTS

The total estimated cost of the proposed construction can be properly allocated to irrigation. The reservoir will have no material influence on floods, and no flood control allocation is justified. There are no opportunities for profitable power development. Indian lands are not involved. It is believed that the irrigation interests can repay, in 40 annual installments, the entire allotment for construction from funds made available under the act of August 11, 1939, and the amendments thereto, now estimated at \$600,000. The amount of water to be reserved for the Park Service for use in the Mesa Verde National Park is relatively small, and it is planned that the financial contribution of the National Park Service to the construction of the dam, reservoir, and appurtenant works will be confined to the services, materials, or supplies which that agency may contribute in connection with the Civilian Conservation Corps camp which it shall make available to the project from its allotment of camps. The expenditures by the Department of Agriculture, estimated at \$80,000 from funds appropriated under the act of August 11, 1939 and the amendments thereto, will be repaid in accordance with Section 5 of the Act as amended.

FINDINGS, CERTIFICATIONS, AND RECOMMENDATIONS

Based on the foregoing report and other data available to me concerning the proposed project, I make the following findings and certifications:

1. I find and certify that the proposed project has engineering feasibility.
2. I find that the estimated cost of the proposed construction is \$1,475,000, exclusive of the cost of participation by the Department of Agriculture, which is estimated at \$125,000.
3. I find that the entire estimated cost of this project properly can be allocated to irrigation; that no part of the estimated cost of the project can properly be allocated to municipal or miscellaneous water supplies or power and probably be returned to the United States in revenues therefrom; and that no part of the estimated cost of the project can properly be allocated to the irrigation of Indian trust and tribal lands, or to flood control.
4. I find and certify that the part of the estimated cost which probably can be repaid by the water users in accordance with the requirements of Section 4 of the Act of August 11, 1939, as amended, is \$600,000, in addition to the monies out of the amount to be expended on land development and related activities to be repaid as provided in Section 5 of the Act of August 11, 1939, as amended.

I recommend that you approve the foregoing report and findings; and I recommend that you find, by your approval of this report that services, labor, materials, easements and other property, including monies for the construction of the project should be made available to the Department of the Interior by the Work Projects Administration, the Civilian Conservation Corps, or other Federal agencies in the amount found necessary by me to make up the difference between the estimated cost of the project construction and the amount which will be allocated from appropriations made under the provisions of the act of August 11, 1939, and the amendments thereto.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE.

Approved October 24, 1940.

(Signed) FRANKLIN D. ROOSEVELT,
President.

THE SECRETARY OF THE INTERIOR,
Washington, September 18, 1944.

THE PRESIDENT,

The White House,

(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: On October 24, 1940, you approved a report which I had submitted recommending the construction of the Mancos irrigation project in Montezuma County, Colorado, under the provisions of the act of August 11, 1939 (53 Stat. 1418) as amended. Copies of papers relating to the authorization of this project are enclosed.

There is also enclosed a letter dated August 17, 1944, addressed to you, from Mr. Wilson Cowen, Assistant War Food Administra-

tor, acting in the stead of the Secretary of Agriculture, relating to the proposed participation of the Department of Agriculture in the project.

When the original papers were submitted in 1940, there was included a letter addressed to me, dated September 19, 1940, signed by Mr. Paul H. Appleby, Acting Secretary of Agriculture. In this letter Mr. Appleby outlined the activities proposed to be undertaken by the Department of Agriculture, and estimated that \$80,000 would be required in addition to a non-reimbursable contribution from the Work Projects Administration amounting to approximately \$45,000. It was indicated that these funds would be used primarily for field investigations, surveys, and planning for the entire project and for land development of not more than 2,000 acres which might be purchased to effect unit reorganizations. Since the approval of the project, the Department of Agriculture has carried on detailed economic and engineering studies and now believes that more extensive participation would be desirable. The work now proposed would involve an additional expenditure of approximately \$393,000 from appropriations authorized by the act of October 14, 1940 (54 Stat. 1119). Such expenditures would be made from funds under the control of the Department of Agriculture.

In his letter, Mr. Cowen estimates that the water users can repay \$205,000 of the amount now requested, in addition to the \$80,000 previously allocated to the Department of Agriculture. This total of \$285,000 is in addition to the reimbursable construction cost of \$60,000 which the Mancos Water Conservancy District has agreed to repay to the United States under a contract dated July 20, 1942. The repayment estimates are based upon the economic studies recently completed by that Department and have not been reviewed by the Department of the Interior.

Construction of the project was undertaken by the Bureau of Reclamation in 1941 and continued with labor furnished by the Work Projects Administration and Civilian Conservation Corps until these agencies were liquidated. The War Production Board issued a stop construction order in connection with the Bureau's work on November 16, 1942. At that time negotiations with the Selective Service System relating to the establishment of a Civilian Public Service camp were well advanced, and the November 16 order was lifted on December 4, 1942, to the extent necessary to keep Civilian Public Service assignees gainfully employed. A Civilian Public Service camp was opened on the project on July 1, 1943. On August 12, 1943, the War Production Board removed all restrictions previously imposed with respect to the employment of persons in the custody of Civilian Public Service. Construction was continued, however, with Civilian Public Service labor only as it was believed that the presence of contract labor or free Government forces on the project would provoke serious conflicts in labor relations. Under these conditions, reasonably satisfactory progress has been made to date, and it is planned to continue this program throughout the 1944 construction season. Consideration is now being given toward expanding construction activities in

1945 and it is believed that some storage could be made available by the 1946 irrigation season. While the storage to be provided by the Bureau would furnish a much-needed supplemental water supply, the lands are, to a large extent, now under irrigation and could benefit immediately through the land leveling and other activities proposed by the Department of Agriculture.

Following consultation with the War Food Administrator, acting in the stead of the Secretary of Agriculture, I find that the proposed construction is justifiable as an aid in the production of needed agricultural products. Accordingly, I transmit the recommendations of the Assistant War Food Administrator and recommend that you approve this report.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved December 20, 1944.

(Signed) FRANKLIN D. ROOSEVELT,
President.

An act to authorize the Secretary of the Interior to contract with the Mancos Water Conservancy District, increasing the reimbursable construction cost obligation of the district to the United States for construction of the Mancos project and extending the repayment period. (Act of June 25, 1947, 61 Stat. 176, Public Law 109, 80th Cong., 1st sess.)

That the Secretary of the Interior is authorized to enter into a contract amending that certain contract between the Mancos Water Conservancy District and the United States dated July 20, 1942, to provide that the reimbursable construction cost obligation of the district to the United States for construction of the Mancos project will be increased from \$600,000 to \$900,000, and that the period of repayment of this obligation will be extended from forty years to sixty years.

MICHAUD FLATS PROJECT

IDAHO

The Michaud Flats Project was approved by the Secretary of the Interior on July 1, 1954, and authorized by Congress on August 31, 1954 (68 Stat. 1026, Public Law 741, 83d Cong., 2d sess.).

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D. C., February 19, 1954.

THE SECRETARY OF THE INTERIOR.

SIR: This is my proposed report on the potential Michaud Flats project, Idaho. It is based on and includes the accompanying report of the regional director, Bureau of Reclamation, Boise, Idaho.

This irrigation project is located in Power County, Idaho, in the immediate vicinity of the town of American Falls. The irrigable lands consisting of 11,035 acres extend in a narrow strip northeast and southwest from American Falls and lie just south of the American Falls Reservoir and the Snake River.

The economy of the project area is based largely on dry farming. This is a semi-arid area with average annual precipitation of about 13 inches, of which less than 6 inches occurs during the growing season. Actually, dry farming is marginal and is successful only during periods of high demand and prices and sufficient rainfall. The welfare of the community has suffered frequently because of variation in these factors. Irrigation would broaden the agricultural base and stabilize the economy of the area. The local people recognize the need for irrigation and have expressed on various occasions the desire that such a project as discussed herein be constructed. The project is economically justified in that the expected benefits are well in excess of estimated costs.

Water supply would be obtained from storage reserved for the project in the Palisades and American Falls Reservoirs and from pumping from ground water. The storage water would be pumped directly from the American Falls Reservoir to serve 7,077 acres via two main canals. Pumping from wells tapping the ground water supply would provide water adequate to serve an additional

3,958 acres. Of the total, approximately 9,500 acres would receive water from surface laterals and about 1,500 acres by sprinkler application. In addition to the main pumping plant, canals, and wells with associated equipment, the project would consist of laterals, drains, and necessary electrical works.

As stated in the regional director's report, until such time as energy is available from the authorized Federal powerplant at American Falls Dam, pumping power probably would be furnished by wheeling over Idaho Power Co. lines. Based upon the proposed rates quoted in the report, this interim plan appears to be slightly more favorable than the plan for Federal construction of the electric distribution system. However, the costs of the two plans are such that the finally established rates for the pumping power will determine which plan is actually the cheaper.

The estimated cost of the project based on July 1952 prices is \$4,578,500. Indexed to July 1953 prices this would amount to approximately \$4,600,000. Included in the project cost is \$474,500 which is the cost of storage in Palisades and American Falls Reservoirs allocated to irrigation and assigned to the Michaud Flats project. Annual operation, maintenance, and replacement costs, including pumping energy, are estimated to amount to \$74,500. This amount would be slightly higher during the period of wheeling of pumping power by the power company.

All of the estimated cost is allocated to irrigation and is reimbursable. Studies indicate that the irrigators probably would repay \$2,890,000 or 63 percent of the total cost in a 50-year repayment period following a 10-year development period. It is recommended that net power revenues from the Palisades project and any associated projects be utilized to repay the costs beyond the water users repayment ability. The net surplus power revenues from the Palisades project, including the American Falls powerplant, amounting to \$856,000 per year would be sufficient to pay the reimbursable costs beyond the repayment ability of the Michaud Flats irrigators in approximately 2 years after such revenues become available.

In the preparation of this report, consideration was given to a plan for irrigation of lands in the Fort Hall Indian Reservation in combination with the Michaud Flats area. It was found that it would be more economical and advantageous to handle the Indian irrigation unit separately, although the advantage of making power revenues from the Palisades project available to assist in repayment of the portion of the cost of the Indian project is recognized. This would require legislative authorization, but would be compatible with the overall irrigation plan for this area developed by the Bureau of Indian Affairs and the Bureau of Reclamation.

The Fish and Wildlife Service of this Department has studied the proposed project and has concluded that it would have certain wildlife benefits and would not affect fishery resources significantly.

I concur in and adopt the recommendations of the regional director as set forth in paragraph 21 of his report and the recom-

mendations of the Fish and Wildlife Service, dated January 30, 1953, which is appended to the underlying report.

I recommend that you approve and adopt this report, including the appended Fish and Wildlife report, as your proposed report on the Michaud Flats project and that you authorize me in your behalf to transmit copies to the States of the Columbia River Basin and to the Secretary of the Army in accordance with requirements of the Flood Control Act of 1944 (58 Stat. 887), to the State of Idaho for the views and recommendations of the head of the agency exercising administration over the wildlife resources of that State in accordance with provisions of the act of August 14, 1946 (60 Stat. 1080), and to other interested Federal agencies for their comments.

Respectfully,

(Signed) W. A. DEXHEIMER,
Commissioner.

Approved and adopted: March 15, 1954.

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D. C., June 28, 1954.

THE SECRETARY OF THE INTERIOR.

SIR: This is my report on the Michaud Flats project, Idaho. It is based on, and includes, the proposed report on this project which you approved and adopted on March 15, 1954.

Copies of your proposed report were transmitted to the States of the Columbia River Basin and to the Secretary of the Army in accordance with the provisions of section 1 (c) of the Flood Control Act of 1944 (58 Stat. 887) and to the State of Idaho for comments from the head of the agency exercising administration over the wildlife resources of that State in accordance with the provisions of the act of August 14, 1946 (60 Stat. 1080). Copies of the report were sent also to the agencies represented on the Federal Inter-Agency River Basin Committee for their comments. Comments have been received from all States and agencies to which the report was sent and copies are attached.

In view of the favorable nature of the comments received it does not appear that revision of your proposed report as a result of the review of various agencies is necessary. In particular the officials of the State of Idaho, as well as other review agencies, advised that they were pleased to recommend the authorization of the Michaud Flats project.

Accordingly, I recommend that you approve and adopt this report as your report on the Michaud Flats project, Idaho, and that you transmit it together with the attached comments to the Pres-

ident and subsequently to the Congress in accordance with the provisions of the Reclamation Project Act of 1939.

Respectfully,

(Signed) W. A. DEXHEIMER,
Commissioner.

Approved and adopted: July 1, 1954.

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., July 1, 1954.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: My report on the Michaud Flats project, Idaho, is transmitted herewith, pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

Michaud Flats project, utilizing ground water and water regulated by existing American Falls Reservoir and the Palisades Reservoir which is currently under construction, would provide for the irrigation of 11,035 acres of land in the immediate vicinity of the town of American Falls, Idaho. Irrigation of these lands has been contemplated for many years and is necessary to the economic welfare of this semi-arid area in which dry farming prevails. This is a single-purpose project and the estimated cost of about \$4,600,000, based on July 1953 prices, is all allocated to irrigation. The project has a benefit-cost ratio of about 2.8 to 1, and interested local persons have expressed approval of the general plan. I recommend that the Michaud Flats project be authorized as set forth in my report.

The report has been transmitted to officials of the States of the Columbia River Basin and to the Secretary of the Army for their consideration and recommendations as required by the provisions of section 1 (c) of the Flood Control Act of 1944 (53 Stat. 887). It was also sent to the State of Idaho for the comments of the head of the agency exercising administration over the wildlife resources of that State as required by the provisions of the act of August 14, 1946 (60 Stat. 1080), and to the Departments of Agriculture, Commerce, Labor, and Health, Education, and Welfare, and the Federal Power Commission in accordance with interagency agreements. All reviewing agencies have submitted comments and copies are enclosed with the report.

I shall appreciate having advice concerning the relationship of the Michaud Flats project to your program before I transmit the report to the Congress for its consideration and appropriate ac-

tion in accordance with the provisions of the Reclamation Project Act of 1939.

Sincerely yours,

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington 25, D. C., July 23, 1954.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This will acknowledge receipt of your letter to the President of July 1, 1954, requesting advice concerning the relationship to the program of the President of your proposed report on the Michaud Flats project, Idaho.

The proposed project consists of 11,035 irrigable acres situated just south of the American Falls Reservoir and along the Snake River in southern Idaho. Water supply for the project would be obtained by pumping from storage reserved in the Palisades and American Falls Reservoirs for 7,077 acres and by pumping from ground water for 3,958 acres. Approximately 9,500 acres would receive water from surface laterals and about 1,500 acres by sprinkler application.

The estimated total cost of the project, \$4,578,500 (\$415 per acre), July 1952 price levels, is allocated to irrigation. The Commissioner's letter refers to a total estimated cost of \$4,600,000, indexed upward to July 1953 prices. Amortized over 50 years at 21½ percent, the annual construction cost is \$161,950 and, including \$35,160 for operation and maintenance, \$18,600 for replacement reserve, and \$29,930 for power, results in a total annual cost of \$245,640. Average annual benefits are estimated at \$591,000, of which \$315,300 are direct benefits to irrigation farms, and \$275,700 are indirect and public benefits. The benefit-cost ratios are 2.40 on total benefits and 1.28 based on direct benefits, using a 50-year period to amortize construction costs.

The Bureau of the Budget believes that 50 years is a reasonable maximum period for repayments of irrigation construction investments, as was recommended in the case of the Department's report on the Colorado River storage project and participating projects. Considering the indefinite status of the presently proposed power repayment schedule and to protect any Federal investment in the proposed project, it would appear appropriate that authorizing legislation should provide some safeguards. Therefore, requests for appropriations for construction of the irrigation works, if authorized, should be conditioned on a current financial analysis and schedule of power generation and rates demonstrating the availability of power revenues in an amount sufficient to repay that part of the irrigation investment not paid by irrigation water

users within 50 years after completion of construction with an allowance for a development period not to exceed 10 years. If sufficient power revenues are not expected to be available for this purpose during the irrigation water users 50-year repayment period, the Michaud Flats project should be deferred accordingly.

It is also believed that, in view of the relatively sizeable secondary benefits involved, consideration should be given to a requirement for the establishment of a conservancy district as a means of insuring maximum justifiable contribution or repayment by those to whom secondary benefits of the project will accrue.

Accordingly, you are advised that, while there would be no objection to the submission of your report to the Congress subject to consideration of the above comments, authorization of the proposed project would be without objection only if provision is made to repay all reimbursable costs within a period of not to exceed 50 years as outlined above. No commitment, however, can be made at this time as to when any estimate of appropriation would be submitted for construction of the project, if authorized by the Congress, since this would be governed by the President's budgetary objectives as determined by the then prevailing fiscal situation.

It is requested that a copy of this letter be included with your report when it is submitted to the Congress.

Sincerely yours,

(Signed) ROWLAND HUGHES,
Director.

DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY,
Washington 25, D. C., July 23, 1954.

HON. JOSEPH W. MARTIN, JR.,
Speaker of the House of Representatives.
Washington 25, D. C.

MY DEAR MR. SPEAKER: My report on the Michaud Flats project, Idaho, is transmitted herewith pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

The report presents a plan for irrigation development of 11,035 acres of irrigable land extending in a narrow strip northeast and southeast from American Falls, Idaho, in the Snake River Basin. Water supply for the irrigation of these lands would be obtained by pumping from storage reserved for the project in the Palisades and American Falls Reservoirs and by pumping from ground water. The estimated cost of this single-purpose development is approximately \$4,600,000 based on July 1953 prices, all of which is allocated to irrigation. The project is economically justified with estimated benefits exceeding the estimated cost in a ratio of 2.8 to 1. The total project costs will be repaid by the water users and the

use of net power revenues from the Palisades and American Falls power developments.

Copies of the proposed report of the Secretary of the Interior were transmitted to the States of the Columbia River Basin and to the Secretary of the Army in accordance with the provisions of section 1 (c) of the Flood Control Act of 1944 (58 Stat. 887) and to the State of Idaho for comments from the head of the agency exercising administration over the wildlife resources of that State in accordance with the provisions of the act of August 14, 1946 (60 Stat. 1080). Copies of the report were sent also to the agencies represented on the Federal Inter-Agency River Basin Committee for their comments. Comments have been received from all States and agencies to which the report was sent and copies are attached.

The report and copies of all comments were transmitted to the President. A copy of the July 23, 1954, letter from the Director of the Bureau of the Budget is enclosed.

Sincerely yours,

(Signed) FRED AANDAHL,
Assistant Secretary of the Interior.

An act to provide for the construction, maintenance, and operation of the Michaud Flats project for irrigation in the State of Idaho. (Act of August 31, 1954, 68 Stat. 1026, Public Law 741, 83d Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Interior is authorized to construct, maintain, and operate the Michaud Flats project for irrigation in the State of Idaho substantially in accordance with the plans set forth in the report of the Bureau of Reclamation Regional Director of Region 1, dated October 22, 1953, with such modifications as the Commissioner of Reclamation, with the approval of the Secretary, may find proper in order to provide for the most efficient accomplishment of all the purposes of such plans. Such construction, maintenance, and operation shall be in accordance with the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto) as far as such laws are not inconsistent with the provisions of section 2 of this Act.

SEC. 2. The project's water users shall be required to assume an obligation to repay out of that part of the total construction cost of the project which the Secretary determines to be properly allocable to irrigation, so much as the Secretary finds to be within their ability to repay prior to the time when, account being taken of the application of power revenues as provided in part (b) of this section, full return of the irrigation allocation is accomplished. Such repayment shall be in accordance with the provisions of the Federal reclamation laws as modified with respect to the Michaud Flats project by the following:

(a) Payments by the contracting organization shall be scheduled, under a contract conforming to the provisions of this Act, on the basis of uniform charges for like classes of land in each

unit of such project which will result in the establishment of annual installments which are, as nearly as practicable, of an amount equal to the ability of such water users to pay in each year having regard to the volume of production of such water users, prices they receive for their farm products, and their production and living costs.

(b) Net power revenues received from the Palisades project, Idaho, and any developments combined therewith for payout purposes under the provisions of the second sentence of section 2 of the Act of September 30, 1950 (64 Stat. 1083), shall, after payout of said projects is accomplished pursuant to law, be applied (concurrently with continued payments by the water users) to payment of the irrigation allocation of the Michaud Flats project until full repayment of said allocation is accomplished.

(c) The Secretary of the Interior shall require that a replacement reserve of an amount sufficient to meet replacement costs likely to be incurred before the end of the repayment period established under the provisions of part (a) above, shall be established and maintained in connection with such Michaud Flats project.

SEC. 3. (a) To aid in the development of not more than twenty-one thousand acres of irrigable land in the Michaud division of the Fort Hall Indian Reservation, as heretofore authorized by the Act of February 4, 1931 (46 Stat. 1061), and hereby reauthorized for construction, operation, and maintenance without regard to the provisions of said Act, the Secretary is authorized—

(1) to reserve for the benefit of those lands when needed, but without prejudice to the interim use thereof for other purposes proper under reclamation laws, eighty-three thousand and nine hundred acre-feet of storage capacity in Palisades Reservoir and forty-seven thousand and seven hundred acre-feet of that portion of the storage capacity in American Falls Reservoir which was set aside for lands in the Michaud area generally by section 3 of the Act of September 30, 1950 (64 Stat. 1083); and

(2) to account for the return of so much of the cost of said development (including the cost of the aforesaid storage space in Palisades and American Falls Reservoirs) as the Secretary finds cannot be repaid by the water users on terms substantially similar to those provided in section 2 of this Act, except for the application of the provisions of the Act of July 1, 1932 (47 Stat. 564), and the Act of March 1, 1907 (34 Stat. 1015, 1024), which are specifically made applicable to the project authorized by this section and Indian lands susceptible of irrigation under said project, by application of net power revenues of the Palisades project and any developments combined therewith for payout purposes under the provisions of the second sentence of section 2 of the Act of September 30, 1950, after payout thereof is accomplished pursuant to law.

(b) Construction of works to serve the Michaud division lands shall be undertaken only if, in consideration thereof and of the additional benefits authorized in the preceding sentence of this

section, such appropriate arrangements as may be required in the circumstances are first made, by contract or otherwise, with respect to a water supply for said lands which, among other things—

(1) limit that supply to the yield of the space in Palisades and American Falls Reservoirs as hereinbefore set forth and to that obtained by the pumping of ground water in an average annual amount of not more than twenty-two thousand and four hundred acre-feet; and

(2) consent to a priority in time and right in such beneficial consumptive uses of the waters of the Snake River, and its tributaries, as are established under the laws of the State of Idaho prior to the date of this Act as against any use of the waters arising on or flowing through the Fort Hall Bottoms within the Fort Hall Indian Reservation, including, but not limited to, the intercepted flow of Ross Fork Creek, the Portneuf River below Pocatello, Big Jimmy Creek, Big Spring Creek, and Clear Creek, for the irrigation of the lands of the Michaud division of the Fort Hall Indian Reservation.

The United States consents to the making of the arrangements aforesaid, and its construction, operation, and maintenance of said works shall constitute a waiver of any of its rights to the use of waters arising on or flowing through the Fort Hall Bottoms within the Fort Hall Indian Reservation, including, but not limited to, the intercepted flow of Ross Fork Creek, the Portneuf River below Pocatello, Big Jimmy Creek, Big Spring Creek, and Clear Creek, for the irrigation of the lands in the Michaud division of the Fort Hall Indian Reservation.

SEC. 4. The Act of February 4, 1931 (46 Stat. 1061), authorizing the development of the Michaud division of the Fort Hall irrigation project is hereby repealed.

SEC. 5. In crediting the net power revenues from the Palisades project to the projects authorized in sections 2 and 3 of this Act, after payout of the Palisades project pursuant to law, said revenues shall be applied ratably to the two projects in proportion to the total construction costs thereof.

SEC. 6. (a) Except as provided in section 3 (b), nothing in this Act shall affect any rights in and to the waters of the Fort Hall Indian Reservation or the Snake River and its tributaries.

(b) Nothing in this Act shall affect the land tenure, allotment, or ownership on the Fort Hall Indian Reservation.

SEC. 7. There are hereby authorized to be appropriated, out of any moneys in the Treasury not otherwise appropriated, \$5,500,000 for construction of the works authorized in section 1 of this Act, and \$5,500,000 for construction of the works authorized in section 3 of this Act, plus such additional amount, if any, as may be required by reason of changes in the costs of construction of the types involved in these projects, as shown by engineering indices. There are also authorized to be appropriated such sums as may be required for the operation and maintenance of said works.

MIDDLE RIO GRANDE PROJECT

NEW MEXICO

The Middle Rio Grande project was originally authorized under the Flood Control Act of 1944 and completion was authorized by the Flood Control Act approved May 17, 1950 (64 Stat. 163). The Commissioner's finding of feasibility was adopted by the Secretary on April 22, 1948.

BUREAU OF RECLAMATION,
Washington, D. C., November 21, 1947.

THE SECRETARY OF THE INTERIOR.

SIR: Transmitted herewith for your approval is a report dated August 20, 1947, on a plan for the development of the Middle Rio Grande project, New Mexico. This has been prepared as a departmental report under the sponsorship of the Bureau of Reclamation. The plan, which embraces the Middle Rio Grande Valley between the Colorado-New Mexico State line and the backwater of Caballo Reservoir in New Mexico, has been developed jointly by the Corps of Engineers and the Bureau of Reclamation in cooperation with local, State, and other Federal agencies. The present report, although comprehensive in scope, deals principally with the irrigation and local drainage phases of the plan. The flood control and major drainage phases of the plan are now being reported on by the Corps of Engineers in a survey report on flood control on the Rio Grande and tributaries in New Mexico. Agreement between the two agencies on a unified plan and upon responsibilities for construction, operation, and maintenance of the major features has been obtained as presented in the "Joint Agreement Between the Secretary of the Interior and the Secretary of the Army on a Unified Plan for Control of Floods, Irrigation, and Use of Water in the Middle Rio Grande Basin in New Mexico," copy of which is attached.

Irrigation has been practiced in the Middle Rio Grande Valley for centuries, first by Indians, later by Spanish colonists, and then by Anglo-Americans who began settling the area in the later half of the nineteenth century. The maximum development was reached in about 1880. After that date, there was a general physical and

economic downtrend because of floods, sediment deposition, and water-logging which resulted in destruction or impairment of irrigation facilities on which the economy of this area relies. During the early part of the present century, several unsuccessful efforts were made to secure a program of rehabilitation for the area. The urgency of the situation finally led to the formation of the Middle Rio Grande conservancy district in 1925. During the next 11 years the District spent almost 10 million dollars for construction of various improvements and remedial works.

Despite this construction program, the economic stability of the Middle Rio Grande Valley is again being threatened by a combination of problems with which the local people can no longer cope. Progressive aggradation of the river channel has caused, and is continuing to cause, a general rise in water table throughout much of the valley floor where practically all of the cultivated lands are located. This has resulted in excessive water-logging and abandonment of productive land, reduction in crop yields on the remaining affected lands, delinquency in repayment of charges with resultant financial difficulties on the part of the Middle Rio Grande conservancy district, a progressive increase in flood damages, and an increase in uncontrolled nonbeneficial consumptive use of water to a point where New Mexico will soon be unable to make the water deliveries to Texas required by the Rio Grande Compact, and at the same time be able to continue present irrigation uses of water.

The irrigated lands of the Middle Rio Grande Valley thus affected lie within the boundaries of the existing Middle Rio Grande conservancy district along both sides of the Rio Grande in Bernalillo, Sandoval, Socorro, and Valencia Counties, New Mex. Main canals and laterals have been constructed to serve about 118,000 acres of land in the district, but only about 79,700 acres, including Indian lands, are irrigated at the present time. Under the proposed plan, a net area of approximately 84,900 acres (including 20,700 acres of Indian lands) within the district would be irrigated.

The plan provides for the rehabilitation and extension of the existing irrigation and related drainage systems and the construction of three sediment and flood control reservoirs, major drainage works, and channel rectification and levee improvements to control sedimentation and flooding in the Middle Rio Grande Valley. An important and necessary part of the plan is the acquisition by the Government of the existing works of the Conservancy District; the proceeds accruing to the District from this purchase by the Government would be used to retire the outstanding indebtedness of the District which now amounts to \$7,426,280. Not covered by the plan, but admittedly an important aspect of the overall picture is the necessity for a watershed program to alleviate the basic sediment problems of the valley and to extend the useful life of the present and future control structures. This need is recognized in the joint agreement between the Secretary of the Interior and the Secretary of the Army, in which it is stated, "The two agencies recognize that there is an important need for supplementary measures for the control of soil erosion and for re-

tardation of runoff in the watersheds which are now being investigated by the Department of Agriculture and the Department of the Interior. Current plans are sufficiently flexible that they can be fully coordinated with any programs for watershed treatment which may be instituted by appropriate Federal or local agencies." In view of the critical nature of the consequences of accelerated erosion on the sedimentation of the reservoirs and aggradation of the river bed, it is most desirable that immediate steps be taken to institute proper control measures on the watershed, and it is recommended that the present programs to accomplish this purpose be enlarged and that a comprehensive program be undertaken by the appropriate federal agencies at the earliest practicable date. It is hoped that State and local agencies also will enlarge the scope of their present operations on the watershed as a part of an integrated program for erosion control and proper use on all classes of land in the watershed. The plan provides for penstocks at the dams to permit future power installations if later investigations indicate that they are practical and economically feasible. The results of these investigations will be the subject of a supplemental report. Construction of certain minor improvements recommended by the Fish and Wildlife Service and the National Park Service for fish and wildlife and recreational purposes is also covered by the plan, and cooperation with the Fish and Wildlife Service will be in accordance with the provisions of Public Law 732—79th Congress. Land development work on Indian lands would be performed by the Office of Indian Affairs.

The estimated cost of the comprehensive plan based on 1947 price levels is \$95,499,000. Since the report presents a unified plan in which it is proposed that the work be carried out primarily by the Corps of Engineers and the Bureau of Reclamation, with secondary undertakings by other agencies, and that the Bureau's portion of this work be accomplished under authority of special legislation, the tentative allocation of costs herein given has been prepared to cover all phases of the entire plan, no matter what agency will be responsible for its individual parts. Of the total estimated cost, therefore, it is proposed that \$75,741,000 be ascribed to flood control and sediment control and be made non-reimbursable. It is estimated, furthermore, that \$670,000 will be required for the programs of the Fish and Wildlife Service, National Park Service, and the Geological Survey in connection with the flood and sedimentation control works and it is proposed that the allocation to these purposes should also be treated as non-reimbursable. A total of \$2,322,000 will be required for improvement and development on Indian owned lands. Of this amount, \$1,467,000 is for reconstruction and extension of works serving present Indian owned lands in the project area, and the remaining \$855,000 is for related land development. It is proposed that the \$1,467,000 be made nonreimbursable, and that the portion of the \$855,000 to be reimbursed, if any, be determined by the Secretary of the Interior. The cost of the features to be reimbursed by the non-Indian properties within the Middle Rio Grande conservancy district is estimated at \$16,766,000.

Development of the Middle Rio Grande area in accordance with the plan presented herewith is justified by the benefits which such development will bring to the area, the surrounding region, and the Nation. The ratio of estimated benefits to cost for the comprehensive plan is 2.8 to 1, on a basis of 1947 prices. On the most conservative basis, the ratio of benefits to costs, for the irrigation and drainage features alone, is 2.3 to 1, on the basis of 1939—44 farm prices and 1947 costs.

Because of the Bureau's concern and responsibilities in connection with the San Luis Valley project above the Middle Rio Grande area, and the Rio Grande project immediately below, the Bureau has taken especial care to assure that the plan for the proposed developments in the Middle valley would not adversely affect those upper and lower projects. The Rio Grande Compact Commission and its engineering advisors have been particularly helpful in this regard and have worked with, and in many respects guided the analyses made by the Bureau to assure that the proposed works could and would be operated in full compliance with the Rio Grande Compact. The Bureau has appreciated this collaboration. In order to achieve the best possible results as was desired by the Compact Commission and the Bureau of Reclamation, the Bureau has made its analyses to cover conditions not only applicable to the present schedule under the Compact, but also under conditions consistent with the new schedule which has been proposed by the engineering advisors and is now under consideration by the Compact Commission at the present time. This timely and detailed cooperation permits a full understanding of the effects of the proposed works together with assurance of protection of water deliveries under the compact in Colorado and Texas, as well as those in New Mexico.

There is sufficient water available from the Rio Grande to furnish the supply required for irrigation under this plan of development and to comply with the Rio Grande Compact.

The day by day assistance and full cooperation of the Middle Rio Grande conservancy district has been not only helpful, but essential to the prudent consideration of the several features of the plan. Its collaboration and the assistance of numerous associations and State and local officials has made possible the preparation of this plan.

Local interests have evidenced their desire for authorization of the plan and initiation of its construction at the earliest possible date and have indicated a willingness to repay within a 40-year period that portion of the estimated cost properly allocated as reimbursable.

I approve of the plan of development for the rehabilitation and improvement of the Middle Rio Grande Valley, N. Mex., presented in the attached report of the regional director.

Accordingly, I recommend that you adopt this as your proposed report and that you authorize me, in your behalf, to transmit copies of this report and accompanying papers, including the regional director's report to the States of Colorado, New Mexico, and Texas, and to the Secretary of the Army in accordance with the requirements of the Flood Control Act of 1944 (58 Stat. 887). Upon ful-

fillment of the requirements of that act, copies of the report, together with any comments which are received, will be submitted for your transmittal to the President and subsequently to the Congress.

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved: November 21, 1947.

(Signed) OSCAR L. CHAPMAN,
Acting Secretary of the Interior.

BUREAU OF RECLAMATION,
Washington, D. C., April 19, 1948.

THE SECRETARY OF THE INTERIOR.

SIR: On November 21, 1947, I transmitted to you a report on a plan for the development of the Middle Rio Grande project, New Mexico. That plan was adopted by Acting Secretary Chapman as the proposed report of the Secretary of the Interior on the same date.

The plan has been developed cooperatively by the Corps of Engineers and the Bureau of Reclamation, in cooperation with numerous local, State, and Federal agencies, all of which were very helpful. A description of their participation was set forth in your proposed report of November 21 and in more detail in the report of the regional director, dated August 30, 1947, which is a part of the proposed report.

Briefly, the project consists of irrigation and drainage works, channel rectification, physical and financial rehabilitation of the irrigated and related areas, levees for local flood protection, and the construction or improvement of reservoirs. All of the works are in New Mexico. They lie between the San Luis Valley project in Colorado and the Rio Grande project in New Mexico and Texas for both of which the Bureau of Reclamation is responsible. Power generation facilities are not recommended at this time.

By joint agreement between the Secretaries of the Interior and the Army, which is a part of the project report, the functions of the two agencies are clearly set forth, as is the assurance that the project will be operated in strict compliance with the Rio Grande Compact. Each of the two agencies has prepared a project report outlining the entire program of work to be done and stressing, properly, the portion of the work for which it is responsible under the secretarial agreement.

It is essential that a comprehensive plan involving the types of work proposed by and for both agencies be undertaken.

The project has engineering feasibility and economic justification as set forth in the proposed report of November 21. The

ratio of estimated benefits to cost is 2.3 to 1 on the basis of 1939—44 farm prices and 1947 construction costs. The recommended reimbursable portions can probably be repaid.

Copies of the proposed report were sent to the Secretary of the Army and to the States of Colorado, New Mexico, and Texas for their views and recommendations pursuant to the provisions of section 1 of the Flood Control Act of 1944 (58 Stat. 887) and to the head of the agency exercising administration over wildlife resources in the State of New Mexico pursuant to Public Law 732, 79th Congress (60 Stat. 1080). Copies of the proposed report were also sent to the Federal Power Commission and the Departments of Agriculture and Commerce. The written views of the States named, the Secretary of the Army, the Chairman of the Federal Power Commission, and the Department of Commerce have been received and are attached. Also attached is a copy of the proposed report of November 21, 1947.

A review of the comments received shows complete agreement in the need for rehabilitation of the Middle Rio Grande to prevent serious economic deterioration.

The State of New Mexico, with but minor qualifications, supports the plan of development proposed. Colorado and Texas approve the objectives of the plan, but object strongly to certain features of it, particularly the proposed Chiflo and Chamita reservoirs. Both States feel that the flood and sediment control capacities proposed for those reservoirs are substantially in excess of those which are reasonably needed.

The State of Texas proposes to eliminate Chiflo reservoir from the plan and substitute in its place a much smaller reservoir at or near the Jarosa reservoir site. The State of Colorado also recommends that the Chiflo reservoir be eliminated from the plan and suggests that a substantial measure of the river control which it would provide could be provided in the Upper Rio Grande basin by construction of reservoirs already authorized for construction by the Bureau of Reclamation as a part of the San Luis Valley project; namely, Wagon Wheel Gap, Platoro and Mogote Reservoirs. Both Colorado and Texas suggest that less storage capacity be provided at the Chamita Reservoir site.

Texas and Colorado, as well as New Mexico, are in general agreement with the plan for irrigation and interior drainage, with the need for channel rectification and channel degradation, and with other phases of the plan for flood control.

Comments of the Secretary of the Army and the Federal Power Commission are favorable to immediate authorization of the coordinated plan of development. The Department of Commerce has reviewed the report but makes no suggestion for changes. The Department of Agriculture has not submitted comments on the report.

Basic to the coordination of the investigations of the agencies was the Bureau of Reclamation's recognition that the Corps of Engineers should be responsible for the preparation of the flood control portions of the coordinated plan insofar as they relate to the reports being prepared. The Bureau of Reclamation, therefore,

accepted the views of the Corps of Engineers on the reservoir capacities needed for flood control at the Chiffo, Chamita, and Jemez Reservoirs, and the design maximum regulated flow to be allowed to pass down the main channel of the Rio Grande. These regulated flows will be below the limit at which damage to existing and future facilities for the diversion of irrigation water supplies would occur. The capacities of the reservoir outlet works should, of course, be sufficient to permit releases of water from the reservoirs at rates which experience indicates is required to accomplish the necessary degradation of the channel.

The Bureau of Reclamation and the Corps of Engineers are in complete agreement with the recommendations of all three States that, whatever plan of reservoir operation is finally adopted, that plan be in strict accord with the Rio Grande Compact. This concurrence is specifically set forth in the secretarial agreement which is part of the report. The plan for operation will be negotiated by the respective agencies in cooperation with the States which are parties to the Compact.

The Bureau of Reclamation is convinced that a unified plan of development of the Middle Rio Grande Valley will accomplish much needed improvements for the protection of the existing economy as well as for its further development, and concludes that such a plan should be authorized for immediate construction. In reaching this conclusion the Bureau is aware that in the fish and wildlife field of activity there would be losses currently estimated by the Fish and Wildlife Service at \$275,000 annually. The Fish and Wildlife Service and the Bureau of Reclamation agree that so far as is practicable, the project should be provided with means for maintaining fish and wildlife values at not less than the present day levels. To this end, all practical and feasible steps should be explored to forestall, restore, or offset the losses indicated above, and such means as are found to be feasible should be carried forward pursuant to provisions of Public Law 732-79th Congress.

In the regional director's report and in my report to you of November 21, 1947, it was proposed that, as an essential part of the plan, the United States acquire the assets of the Middle Rio Grande conservancy district, requiring the district to use the proceeds to retire its outstanding indebtedness. For technical reasons, it now appears that it would be better for the Secretary of the Interior to be authorized to acquire the outstanding evidences of indebtedness of the district at such prices and on such terms and conditions as he may deem necessary and proper for the protection of the interests of the United States and to retire those obligations on such terms and conditions as he may likewise deem necessary and proper. I recommend, therefore that the reports referred to above be modified to this extent.

It is pointed out again, as it was in the proposed report of the Secretary, that the problem of erosion in the Middle Rio Grande Valley will not be settled for all time by the unified plan of development described in the current reports of the Departments of the Interior and of the Army. However, a plan such as has been proposed is essential to safeguard the existing economy until suita-

ble measures can be taken with regard to the erosion problem. Accordingly, as was also suggested in the proposed report and further set forth in the secretarial agreement, it is most desirable that proper soil erosion control measures in the valleys and throughout the watershed be initiated by both local and Federal agencies. The successful adoption of such measures, coupled with the plan proposed herein, are essential to any permanent solution to the problems of the Middle Rio Grande Valley. In this connection, it is possible that reservoirs on the Rio Puerco and the Rio Salado may eventually be needed in addition to the dredging above Elephant Butte Reservoir, but they are not recommended for construction at this time.

Accordingly, and because of the urgency of the situation in the Middle Rio Grande Valley, I recommend that the plan set forth in the proposed report of the Secretary be approved as a whole at an early date, subject to such later modifications in the portions of the plan that are to be undertaken by the Department of the Interior as the Secretary of the Interior may find desirable. It is further recommended that the portion of the total plan to be undertaken by the Department of the Interior pursuant to the agreement between this Department and the Department of the Army be authorized for construction, operation and maintenance in accordance with the recommendations contained in your proposed report.

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved: April 22, 1948.

(Signed) J. A. KRUG,
Secretary of the Interior.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., April 22, 1948.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: Attached is my report and findings on the Middle Rio Grande Project, New Mexico, wherein a plan of development is recommended for authorization.

The Bureau of Reclamation, in cooperation with the Corps of Engineers, local and State agencies, and other agencies of the Department, proposes a plan to rehabilitate and further develop the land and water resources of the Middle Rio Grande Valley in New Mexico, and to protect the lives and property and the interests of the United States in that valley from damage by floods

and continued aggradation of the river channels. This will be accomplished through the physical and financial rehabilitation of irrigated and related areas, extension of the irrigation and drainage systems which serve the agricultural lands, and through construction of sediment and flood control reservoirs, channel rectification works, and levee improvements.

The portion of the plan which it is proposed this Department shall undertake, has been coordinated with that of the Corps of Engineers so that the two supplement each other and together constitute a unified plan which is essential to meet the desired objectives. Agreement has been reached on the works to be constructed by each of the two Departments after the project is authorized. This concurrence is set forth in the joint agreement signed by representatives of the two Departments on November 21, 1947, which is incorporated in the attached report. It would be adverse to the interests of the area and of the Nation if the authorizing legislation did not provide for a comprehensive solution to the immediate problem.

The report has been reviewed by the States of Colorado, New Mexico, and Texas and by the Secretary of the Army in accordance with the provisions of the Flood Control Act of 1944. Copies of the proposed report were furnished to the head of the agency exercising administration over wildlife resources of the State of New Mexico pursuant to Public Law 732, Seventy-ninth Congress. Copies of the report were also furnished to the Federal Power Commission and the Departments of Agriculture and Commerce. Copies of all replies that have been received are attached for your information.

I find the project has engineering feasibility and that the estimated cost of the reimbursable portions of the project to be undertaken by this Department can probably be repaid, all as set forth in my proposed report of November 21, 1947, and as further indicated by the report of the Commissioner of Reclamation attached hereto as a part of my report and approved by me this date. Accordingly, I recommend that the project be authorized for construction and operation as therein set forth.

You will recall that you personally requested that our report on this project be expedited. I shall, therefore, appreciate receiving your views concerning the relation of the plan to your program at your early convenience before transmitting the report to the Congress for its consideration and appropriate action.

Sincerely yours,

(Signed) J. A. KRUG,
Secretary of the Interior.

PROVISIONS OF FLOOD CONTROL ACT OF 1948

[Extracts from] An act authorizing the construction, repair, and preservation of certain public works on rivers and harbors for navigation, flood control, and for other purposes. (Act of June 30, 1948, 62 Stat. 1171, 1175, 1179, Public Law 858, 80th Cong., 2d sess.)

* * * * *

TITLE II—FLOOD CONTROL

SEC. 201. That section 3 of the Act approved June 22, 1936 (Public, Numbered 738, Seventy-fourth Congress), as amended by section 2 of the Act approved June 28, 1938 (Public, Numbered 761, Seventy-fifth Congress), shall apply to all works authorized in this title except that for any channel improvement or channel rectification project, provisions (a), (b), and (c) of section 3 of said Act of June 22, 1936, shall apply thereto, and except as otherwise provided by law: *Provided*, That the authorization for any flood-control project herein adopted requiring local cooperation shall expire five years from the date on which local interests are notified in writing by the Department of the Army of the requirements of local cooperation, unless said interests shall within said time furnish assurances satisfactory to the Secretary of the Army that the required cooperation will be furnished. (62 Stat. 1175, 33 U. S. C. 701c note).

* * * * *

SEC. 203. [Improvement works authorized.]

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RIO GRANDE BASIN

The comprehensive plan for the Rio Grande Basin as set forth in the report of the Chief of Engineers dated April 5, 1948, and in the report of the Bureau of Reclamation dated November 21, 1947, all in substantial accord with the agreement approved by the Secretary of the Army and the Acting Secretary of the Interior on November 21, 1947, is hereby approved except insofar as the recommendations in those reports are inconsistent with the provisions of this Act and subject to the authorizations and limitations set forth herein.

The approval granted above shall be subject to the following conditions and limitations:

(a) Construction of the spillway gate structure at Chamita Dam

shall be deferred so long as New Mexico shall have accrued debits as defined by the Rio Grande Compact and until New Mexico shall consistently accrue credits pursuant to the Rio Grande Compact;

(b) Chiflo Dam and Reservoir on Rio Grande shall be excluded from the Middle Rio Grande project authorized herein without prejudice to subsequent consideration of Chiflo Dam and Reservoir by the Congress;

(c) The Bureau of Reclamation, in conjunction with other interested Federal agencies, is directed to make studies to determine feasible ways and means of reducing nonbeneficial consumption of water by native vegetation in the flood plain of the Rio Grande and its principal tributaries above Caballa Reservoir; and

(d) At all times when New Mexico shall have accrued debits as defined by the Rio Grande Compact all reservoirs constructed as a part of the project shall be operated solely for flood control except as otherwise required by the Rio Grande Compact, and at all times all project works shall be operated in conformity with the Rio Grande Compact as it is administered by the Rio Grande Compact Commission.

In carrying out the provisions of this Act, the Secretary of the Interior shall be governed by and have the powers conferred upon him by the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388), and Acts amendatory thereof or supplementary thereto, except as is otherwise provided in this Act or in the reports referred to above. This Act shall be deemed a supplement to said Federal reclamation laws.

Approval is granted to the Secretary of the Interior subject to the limitations of the authorizations approved from time to time for the prosecution of this plan to acquire in the name of the United States, by purchase or otherwise, any or all of the bonds and other evidences of indebtedness of the Middle Rio Grande Conservancy District outstanding when such authorizations are approved at such prices and on such terms and conditions as he shall deem necessary or proper for the protection of the investment of the United States and to retire those obligations on such terms and conditions as he shall likewise deem proper or necessary.

The Secretary of the Interior, in entering into a contract or contracts for the repayment of the reimbursable construction costs of the Middle Rio Grande project, now estimated at approximately \$18,000,000, shall vary that amount to reflect changes in the estimates of those costs occurring prior to the date of the contract or contracts and in so doing may, if need be, extend the repayment period beyond forty years to permit payment of costs in excess of the present estimate.

Subject to the limitations of authorizations approved from time to time for prosecution of this plan, approval is granted to the Secretary of the Interior to acquire, on behalf of the United States, by purchase or donation, agricultural lands owned by the State of New Mexico within the Middle Rio Grande project and to develop those lands substantially in the manner outlined in the report of the Bureau of Reclamation referred to above. Lands so acquired shall be resold or leased by the Secretary to actual settlers for

agricultural purposes under rules and regulations prescribed by him which rules and regulations shall set out the prices and terms of such sales and leases, the qualifications required of purchasers and lessees, and other matters relating to the disposition and use of these lands, and shall provide a preferred right to purchase or lease any tract of such land to otherwise qualified persons of the following classes in the order here set out, purchasers in any class being preferred to lessees in that or any other class;

(1) The former owner or owners of such tracts, if his or their title thereto was divested by reason of sale for taxes to the State of New Mexico.

(2) Honorably discharged veterans of World War II who are the sons or daughters of the former owner or owners of such tract, if the title of said former owner or owners was divested by reason of sale for taxes to the State of New Mexico.

(3) The sons or daughters of the former owner or owners of such tract other than those referred to in (2) if the title of said former owner or owners was divested by reason of sale for taxes to the State of New Mexico.

(4) Honorably discharged veterans of World War II other than those referred to in (2).

(5) Persons other than those referred to in the clauses above. Any deed executed by the Secretary in favor of any person described under (4) or (5) shall provide that any person described under (1), (2), or (3) shall have the right to purchase any land conveyed by such deed, within a period of ten years after the execution thereof, by (a) paying to the owner the amount or amounts actually paid by him as consideration for such deed and for the actual cost of improvements on such land plus interest at the rate of 6 per centum per annum on such amount or amounts, and (b) assuming any obligations of the owner to the Secretary with respect to such land. Any lease executed by the Secretary under the provisions of this section to any person described under (4) or (5) shall, by its terms, expire not later than five years after the date of its execution. The preferred rights provided for by this section to purchase or lease any land shall continue to be applicable until such land is finally disposed of by the Secretary; but the right of any lessee or purchaser to enter into possession shall be subject to any rights under any prior lease executed by the Secretary. Moneys accruing from the sale or lease of said lands shall be covered into the reclamation fund in the Treasury.

In the administration of the provisions of this Act all water in the Middle Rio Grande Valley in New Mexico shall be deemed to be useful primarily for domestic, municipal, and irrigation purposes.

Nothing in this Act shall be construed as affecting or abrogating in any way the laws of the State of New Mexico in which the Middle Rio Grande Valley lies, relating to the control, appropri-

tion, or distribution of water used in irrigation or for municipal or other uses, or any vested right therein.

Nothing in this Act shall be construed to abrogate or impair existing obligations of the United States or any agency thereof, including obligations to furnish water for irrigation and obligations to any Indian or tribe or band of Indians whether based on treaty, agreement, or Act of Congress.

There is hereby authorized to be appropriated the sum of \$3,500,000 to be expended by the Department of the Army for the partial accomplishment of the comprehensive plan for the Rio Grande Basin. (62 Stat. 1179-1181).

* * * * *

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D. C., April 12, 1949.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This is in reply to your letter of April 22, 1948, to the President, submitting a copy of the report of the Commissioner of Reclamation on the Middle Rio Grande project, New Mexico.

The report recommends that the comprehensive plan proposed therein for development of the Middle Rio Grande project in New Mexico be approved and that the irrigation and drainage phases of the proposed project be authorized for construction by the Federal Government at an estimated cost of \$19,088,110. A companion report by the Corps of Engineers recommends construction of the flood-control phase of the project, including the recommended channel rectification work, at a cost of \$75,665,800. Total cost of the entire project is estimated at \$95,499,213, including allowance for recreation and fish and wildlife development and for Geological Survey work. Initiation of the irrigation and drainage work would be contingent upon negotiation of a repayment contract with the Middle Rio Grande Conservancy District.

It is noted that the comprehensive plan was developed as a result of coordinated studies by the Bureau of Reclamation and the Corps of Engineers and that it is based on a joint agreement between the Secretary of the Interior and the Secretary of War, dated July 25, 1947, setting forth the major features of the proposed comprehensive plan and indicating the agency which is to be responsible for the construction, operation, and maintenance of each major feature. Under the agreement, the improvements to El Vado Reservoir, the Rio Grande Channel rectification operations, the irrigation and project rehabilitation work, and drainage rehabilitation and extension work, would be the responsibility of

the Bureau of Reclamation. Construction of three dams and reservoirs and levees along the floodways for local flood protection would be undertaken by the Corps of Engineers.

It is gratifying to note the high degree of coordination that has been achieved between the Corps of Engineers and the Bureau of Reclamation in the development of the comprehensive plan for this river basin. Both agencies are deserving of commendation for such achievement. With respect to the comprehensive plan developed, your attention is called to certain comments relating particularly to that part of the work which would be undertaken by the Corps of Engineers, but also applying to the project as a whole, which are contained in my letter of today's date to the Secretary of the Army on the subject of the report of the Chief of Engineers on this same project. A copy of that letter has been sent to you for your information.

With respect to the irrigation and drainage phases of the project, it is noted that a favorable benefit-cost ratio of 2.3 to 1 has been computed, but that in doing so, credit has been taken for certain benefits anticipated from expenditures for the construction of the project. While these benefits are relatively small, it is believed that their inclusion in the total of benefits expected from the project is inadvisable and provides an unsound basis upon which to compute such ratios.

It is also noted that allocations of costs are made in the report to sediment detention and storage and to removal of silt from the river channel. The benefits to local interests which are expected to result from these operations are elsewhere in the report separately evaluated. However, in view of these allocations of costs to sediment control and removal, you are advised that classification of such facilities as benefits is considered to be contrary to sound practice since sediment control and removal are not end products but merely means for accomplishing ends in the same way as water storage or control. Consequently, they cannot in themselves be considered benefits. It would thus appear that costs and benefits allocated to sediment control or removal should properly be charged to flood control, or, if these operations improve the functioning of the existing irrigation system, the costs thereof should be charged to irrigation and be considered reimbursable. In the latter event, the benefit-cost ratio of the irrigation and drainage phases of the project would, of course, be reduced below 2.3 but would probably still remain substantially above unity.

The comprehensive plan proposed in the report of the Commissioner of Reclamation has already been approved by the Congress in the Flood Control Act of 1948, with the exception of Chiflo Dam, which was specifically excluded, and with certain other minor restrictions to insure compliance with the Rio Grande compact. You are accordingly advised that authorization of the Chiflo Dam would not be in accord with the program of the President at this time. It is noted that the above-mentioned act includes an authorization for an appropriation of \$3,500,000 to be expended by the Department of the Army for the partial accomplishment of the comprehensive plan. It is also noted that a bill (S. 1392) has been

introduced recently to authorize an appropriation to be expended by the Department of the Interior as well as an addition to the amount already authorized to be appropriated for expenditure by the Department of the Army.

You are further advised that, in view of the statement in the report that cost estimates for the irrigation and drainage phases of the project are considered to be preliminary in character, it is proposed, if there are authorized to be appropriated funds for these phases of the project, to reexamine the question of economic justification for these items at the time requests for funds for initiation of construction are received in this office.

A copy of this letter is being sent to the Secretary of the Army and the Secretary of Agriculture for their information.

Sincerely yours,

(Signed) FRANK PACE, JR.,
Director.

PROVISIONS OF THE FLOOD CONTROL ACT OF 1950

[Extract from] An act authorizing the construction, repair, and preservation of certain public works on rivers and harbors for navigation, flood control, and for other purposes. (Act of May 17, 1950, 64 Stat. 163, 176, Public Law 516, 81st Cong., 2d sess.)

* * * * *

RIO GRANDE BASIN

In addition to previous authorizations, there is hereby authorized the completion of the plan approved in the Flood Control Act of June 30, 1948, for the Rio Grande Basin, at an estimated cost of \$39,000,000 for the work to be prosecuted by the Department of the Army and \$30,179,000 for the work to be prosecuted by the Department of the Interior as set forth in House Document Numbered 243, Eighty-first Congress.

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DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D. C., July 20, 1950.

HON. SAM RAYBURN,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: I submit herewith, pursuant to law, my report and findings on the Middle Rio Grande project, New Mexico. The project consists of irrigation and drainage works, chan-

nel rectification, physical and financial rehabilitation of the irrigated and related areas, levees for local flood protection, and the construction or improvement of reservoirs.

The plan, which has been developed cooperatively by the Bureau of Reclamation and the Corps of Engineers, will rehabilitate and further develop the land and water resources of the Rio Grande Valley in New Mexico, and protect lives and property and the interests of the United States in that valley from damage by floods and continued aggradation of the river channels. In a joint agreement between this Department and the Department of the Army, the works to be constructed by each agency in completing the unified plan are clearly set forth. Also set forth is the assurance that the project will be operated in strict compliance with the Rio Grande compact.

The comprehensive plan proposed in this report was approved by the Congress in the Flood Control Act of 1948 (Public Law 858, 80th Cong.) with the exception of Chiflo Dam and Reservoir and with certain other minor restrictions to insure compliance with the Rio Grande compact. The above act authorized the appropriation of \$3,500,000 to be expended by the Department of the Army for partial accomplishment of the comprehensive plan. Public Law 916, Eighty-first Congress, approved May 17, 1950, provided authorization for appropriations for completion of the project, at an estimated cost of \$39,000,000 in addition to the earlier authorization, for work to be undertaken by the Department of the Army and \$30,179,000 for work to be undertaken by the Department of the Interior.

The report has been transmitted to the States of Colorado, New Mexico, and Texas and to the Secretary of the Army pursuant to the provisions of section 1 of the Flood Control Act of 1944 (58 Stat. 887) and to the State of New Mexico for the comments of the head of the agency exercising administration over the wildlife resources of that State, as required by the provisions of the act of August 14, 1946, (60 Stat. 1080). The report has also been reviewed by the Federal Power Commission and the Departments of Agriculture and Commerce. The views and comments of all the above are enclosed with the report.

On April 22, 1948, this report was submitted to the President. By letter dated April 12, 1949, the Director of the Bureau of the Budget, noting that the comprehensive plan, with the exception of Chiflo Dam, had been approved by the Congress, advised that the authorization of the Chiflo Dam would not be in accord with the program of the President at this time. A copy of his letter is enclosed.

Inasmuch as the Middle Rio Grande project has been approved by the Flood Control Act of 1948, and as appropriations for the completion of the plan have been authorized, it would appear desirable that the report and the accompanying comments be printed as a public document.

Sincerely yours,

(Signed) OSCAR L. CHAPMAN,
Secretary of the Interior.

THE WHITE HOUSE,
Washington, May 23, 1951.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: I have received your letter of April 19, 1951, outlining a plan which would help to relieve the serious water shortage now confronting the Middle Rio Grande Basin. The plan contemplates the construction of a drain by rechanneling a section of the Rio Grande upstream from Elephant Butte Reservoir through the San Marcial swamp. You anticipate that this improvement would increase water supplies in the area by an estimated 140 thousand acre-feet annually. You also point out that construction must be initiated this summer if some measure of relief is to be provided by the 1952 irrigation season, and that funds in the amount of \$1,463,000 would be required to perform the proposed construction.

It is my understanding that it would be possible to perform the most urgent work which would be of immediate benefit in the present emergency with the use of available funds through a reprogramming of the Bureau of Reclamation construction and rehabilitation activities and that you will in your presentations to the Senate subcommittee in justification of the 1952 budget estimates outline this plan for assistance in meeting the critical drought situation.

Approval is hereby given to this proposal with the understanding that the work is to be considered as an emergency measure limited to the minimum necessary to reduce the excessive evaporation in the area and conserve and utilize existing sources of water and not as initiation of construction of the authorized comprehensive flood control, irrigation, and drainage project for the Middle Rio Grande Valley.

Sincerely yours,

(Signed) HARRY S. TRUMAN,
President.

MILK RIVER PROJECT

MONTANA

The original Milk River project, or St. Mary-Milk River project, was authorized by the Secretary under the Reclamation Act of 1902 on March 25, 1905; examined and reported upon by a Board of Army Engineers and approved by the President on January 5, 1911, in accordance with the act of June 25, 1910 (36 Stat. 835). See the recommendations of the Director of the Geological Survey, March 7, 1903 (p. 9), and the Secretary's conditional approval of March 14, 1903 (p. 14).

The Chain Lakes Dam¹ and Reservoir, renamed Fresno Dam and Reservoir, was found feasible by the Secretary on August 8, 1935, and approved by the President in accordance with section 4 of the act of June 25, 1910 (36 Stat. 836), and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702).

Construction of the Saco Divide unit was recommended by the Secretary on March 11, 1941, and approved by the President on April 11, 1941, under the terms of the act of May 10, 1939 (53 Stat. 685, 719), and the act of October 10, 1940 (54 Stat. 1108). It was reauthorized as part of the Missouri River Basin project under the provision of the Flood Control Acts of 1944 and 1946.

The Dodson Pumping unit was found feasible and authorized by the Secretary on February 2, 1944, and approved by the President on March 17, 1944, under the provisions of the Reclamation Project Act of 1939. It was reauthorized as part of the Missouri River Basin project under the provisions of the Flood Control Acts of 1944 and 1946; however, construction was undertaken under the original authorization so that Dodson Pumping unit is not a part of the Missouri River Basin project.

UNITED STATES GEOLOGICAL SURVEY,
Malta, Montana, September 19, 1904.

CHIEF ENGINEER,
Reclamation Service, Washington, D. C.

As a result of an examination of the Reclamation Projects in northern Montana, we have to make the following report:

¹ The Chain Lakes Dam and Reservoir (Fresno Dam and Reservoir) was initiated under the provisions of the National Industrial Recovery Act of 1933.

The St. Mary-Milk River project involves the storage of water in St. Mary Lakes and its conduction to the north fork of Milk River by means of canal 27.4 miles long. The water is then to flow down Milk River through Canada, into Montana, to be used in Lower Milk River Valley. In order to utilize the diversion canal to its full capacity and to provide a satisfactory water supply for the lands to be irrigated it is necessary to have a large storage reservoir in the Lower Milk River Valley. For this purpose, complete surveys have been made of Bowdoin Lake, near Malta. This reservoir belongs to private parties, who are very unreasonable in their demands for its use. It also necessitates the removal of about 11 miles of railroad, which would be expensive and troublesome. The obstacles have threatened to delay the whole project, or render its feasibility doubtful. Fortunately, however, the topographic surveys have disclosed the existence of a reservoir site on Milk River at Chain Lakes above Havre, entirely in Montana, on which surveys are now in progress, and which appears to be a feasible site with perhaps 300,000 acre feet storage capacity. This removed the most serious obstacle to the project from an engineering stand point. The only remaining difficulty of importance is the possibility of the diversion of St. Mary water while flowing through Canada in Milk River. To remove this danger, an international agreement should be arranged, by which the Canadian Government will undertake to protect the delivery of stored water through Milk River. The terms of this agreement as set forth in your conversation with Mr. E. T. Galt, of date April 5, 1904, seemed to us to be satisfactory with some amplification.

On page 3 of the memoranda under the heading "Diversion from Milk River" it should be made clear that under no circumstances can stored water be demanded, during the months of January, February, March, April and May, or in other words, that during those months the Canadian canal is entitled to take from Milk River *only* such water as may be flowing in Milk River at the time in its natural state, without increment from the St. Mary canal, up to 330 second feet, less that previously appropriated in Montana.

It should also be emphasized that any recognition of rights for the diversion of water from Milk River are necessarily subject to the prior rights of inhabitants of Milk River Valley in Montana. The memorandum recognizes Canadian rights to prior appropriations from St. Mary River, and should recognize with equal clearness, the prior appropriations from Milk River in Montana. Neither the American, nor the Canadian Government has the right to interfere with prior appropriations either from St. Mary or Milk River.

It is important that a satisfactory agreement be entered into along the above lines, as early as possible, as it removes the chief remaining obstacle in the way of the construction of the St. Mary project.

The water supply for this project is considered sufficient for approximately 200,000 acres of land, and it will require about 160,000 acres of irrigated land to pay for the project. The data

regarding irrigable lands is not complete, but it is known that more than 160,000 acres can be reached by diversion from Milk River, and this may reach 200,000 acres. Of the area reached, however, more than one half is private land, and part of this is already irrigated. The project is not feasible unless a large majority of the private land covered contribute to the cost. It is important, therefore, that the disposition of the land owners on this point be ascertained at the earliest possible moment. A portion of the irrigable land is on the Fort Belknap Indian Reservation, and as soon as matters are arranged with Canada, Legislation should be secured to render these lands available for irrigation under the provision of the Reclamation Act.

We have provided for the elimination of the change in location of the Great Northern railroad at the diversion site near Dodson, and if our expectations of results from the Chain Lakes Reservoir are realized, the removal of tracks from the Bowdoin Reservoir site will not be necessary for this project.

According to appointment, we were met by Messrs. Summers, Patterson and Hamilton, representing the Great Northern railroad, and in conference with them, we were informed of the results of the surveys and estimates of the cost of removal of railroad track. The figures given us are copied and transmitted herewith. We were not able to obtain any specific declaration of policy from the railroad people regarding the division of costs of relocation of track, and cannot make any recommendations on that point now. We are convinced that the St. Mary-Milk River Project is feasible with the removal of the difficulties mentioned.

The project on the Marias involves a diversion dam of earth 195 feet high, with some additional height to provide necessary storage on the top of the lake. The canal would be over 17 miles long before reaching any irrigable land, and from that point would command probably 200,000 acres of land on Lonesome Prairie, and its waste waters would drain into Milk River and be available for irrigation there. A reservoir site has been found at Lonesome Lake in the midst of the Lonesome Prairie, and will be surveyed next month, as part of the Marias Project. Little is now known of its size and value. Storage to the amount of about 75,000 acre feet can also be provided in Two Medicine Lake, on the head waters of the Marias. It is probable that the water supply and storage facilities of the project will provide irrigation for over 250,000 acres, which may be used either on Lonesome Prairie or in Milk River Valley, wherever most needed. It appears probable that if the Canadian Government does not make satisfactory guarantees to justify the construction of the St. Mary Reservoir and canals, the Marias drainage basin can be made to serve all available land in Milk River Valley, and an additional area on Lonesome Prairie. The investigation on the Marias River cannot be completed this year, but enough will be known to determine its approximate cost and the acreage it will serve. It is probable that the acreage cost will be greater than that of St. Mary.

We have requested Mr. C. C. Babb, District Engineer, to obtain the following information, named in the order of its importance:

1. Additional available acreage to be irrigated in Milk River Valley.

2. The capacity and cost of Chain Lakes Reservoir.

3. Capacity and cost of Lonesome Lake Reservoir.

4. Area of available land under Marias Canal.

5. Area of available land under Lonesome Lake Reservoir.

6. Area of lake formed by diversion dam on Marias River.

7. Completion of borings at Marias Diversion.

We have the following recommendations to make to you:

1. That steps be taken as soon as possible, to obtain from the Canadian Government a guarantee of the use of Milk River channel for the conduction of St. Mary waters.

2. That Mr. C. C. Babb be instructed to announce to the people of Milk River Valley that subject to suitable arrangements with Canada, the irrigation of Milk River Valley is feasible and will be undertaken as soon as a sufficient acreage of private lands are pledged to return their proportion of the cost of the project, and for this purpose they are advised to form an organization of land owners to obtain pledges of land for the above purpose, and that it is desirable that 100,000 acres of land be pledged, and absolutely necessary that at least 70,000 acres be thus pledged

3. That as soon as the proper arrangements with Canada can be made, and the proper acreage of land subscribed, steps be taken to acquire necessary right of way, and to let contracts for construction.

4. If proper arrangements cannot be made promptly with Canada, we recommend that the investigation of the Marias be completed as soon as possible, with a view of irrigating Milk River Valley from that source.

Very respectfully,

(Signed) A. P. DAVIS.
GEORGE Y. WISNER.
H. N. SAVAGE.
CYRUS C. BABB.

OFFICE OF THE SECRETARY,
Washington, March 25, 1905.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: In a letter of the 24th instant to the Department you have reported with respect to the progress of the surveys and examinations of the Milk River Project, Montana, and have referred to the situation in the Milk River Valley with respect to the contemplated diversion of the waters of Milk River by citizens of Canada, and to the necessity of taking action at the present time in the matter of the proposed construction of a portion of the project.

You have stated that there is not now available in the Reclamation fund an amount sufficient to complete the entire project without depriving other states of their proper share of the fund, and you have stated that it is estimated that \$1,000,000 will be sufficient to store waters in the St. Marys Lakes and divert this across the low divide into the North Fork of Milk River. You have accordingly recommended that \$1,000,000 be provisionally set aside in the Reclamation fund for the construction of storage works on St. Marys River, Montana, and for diverting the stored waters to the head of Milk River in that State.

I have given due consideration to the subject matter of your letter and in view of the facts you have related and of your recommendation, I hereby set aside \$1,000,000 provisionally from the fund provided by the act of June 17, 1902—32 Stat. 388—and authorize you to take the proper action toward carrying out that portion of the project which was considered in your letter.

With respect to the organization of water users' associations and the entering into of contracts, reimbursing the reclamation fund, as well as the preparation of final plans and advertising for bids, I authorize you to take action under the conditions you have outlined.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

U. S. GEOLOGICAL SURVEY,
January 11, 1906.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: By letter of March 25, 1905, there was provisionally set aside \$1,000,000 for the construction of the St. Mary Project.

Preliminary surveys are finished with the results showing that about 200,000 acres of Lower Milk River Valley in Montana can be irrigated at a cost of about \$25 per acre. The elevation of the land varies from 2,000 to 2,400 feet. After water is placed on it it will have a value of from \$35 to \$40 per acre. To carry out this plan it will be necessary to conduct St. Mary River water through Canadian territory for 100 miles or more. Memoranda for a necessary treaty with Canada making provision for this was transmitted to the State Department November 11, 1905. Attention to this treaty was called in my letter of the 28th ultimo.

The Alberta Railway and Irrigation Company is understood to be planning for an enlargement the coming spring of its main canal from the St. Mary River and of a further extension of its lateral systems in pursuance of a permit for the use of the waters of the St. Mary and Milk rivers issued by the Canadian Government. The company is probably proceeding upon the theory that the more

water it diverts and uses the better will be its standing in future negotiations or in any adjustment that may hereafter be made as to the use of the waters of the St. Mary and Milk rivers between the United States and Canada.

The settlers of the Lower Milk River Valley are now engaged in an extensive and important suit to adjudicate the vested rights of the private ditches in the Valley, for the purpose of preparing the Valley for the construction of the project by the Government. The case will come to trial by March next. Without question there will be great opposition from these people if the idea of reclaiming the lands of the Lower Valley be dropped, and the plan, as noted below, of irrigating the Blackfeet Indian Reservation be adopted.

If the necessary treaty can not be made with Canada, St. Mary water can be used on lands in the eastern part of the Blackfeet Indian Reservation and immediately adjacent to the eastward where 100,000 acres can be reclaimed. To do this it will be necessary to extend this proposed St. Mary canal across the North and South Forks of the Milk River and to the divide above the irrigable lands in question. The total expense of this project including distribution canals, will be about \$3,000,000, or a cost of \$30 per acre. This latter figure will be about the value of the land after water is applied to it. The general altitude of this area is from 3,700 to 4,000 feet. To carry out this plan it will be necessary to have suitable legislation passed authorizing the disposal of the lands of the Indian Reservation which will form part of the project.

The estimated cost of the canal, 23 miles long from St. Mary Lakes to North Fork of Milk River, is about \$900,000. This construction is the same for either plan and can be started now, pending the settlement of the Canadian question and pending the decision as to which of the two feasible localities the water is to be used upon.

The importance of the interests of the United States in this matter and the necessity of preserving its status in relation to these waters requires that it shall pursue this work with diligence in order to effect the claims of an equitable nature which the Canadian Government may in future advance in regard to the waters of these rivers.

There is now no other action possible for this purpose than the beginning of construction.

I respectfully recommend, therefore, that authority be given to draw specifications and advertise for bids for the construction of a canal from St. Mary River to North Fork of Milk River.

Very respectfully,

(Signed) CHAS. D. WALCOTT,
Director.

DEPARTMENT OF THE INTERIOR,
Washington, January 15, 1906.

THE DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: By letter of March 25, 1905, acting on your recommendation in the premises, the Department provisionally appropriated from the Reclamation fund, \$1,000,000 for the construction of the so-called St. Mary Project, in the State of Montana.

I am now in receipt of your letter of the 11th instant recommending, for reasons stated, that authority be given to draw specifications and advertise for bids for the construction of a canal from St. Mary River to North Fork of Milk River, the estimated cost of which is \$900,000.

It appears that because of the international features involved, the importance of the interests of the United States in this matter, and the necessity of preserving its status in relation to these waters require that it shall pursue this work with diligence in order to offset the claims of an equitable nature which the Canadian Government may in future advance in regard to the waters of the St. Mary and Milk Rivers, and you further aver that there is no other action possible for this purpose than the beginning of construction of the improvement which you recommend.

After consideration of the matter your recommendation is approved, and authority is hereby given to draw specifications and advertise for bids for the construction of the canal from St. Mary River to North Fork of Milk River.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

FRESNO DAM

THE SECRETARY OF THE INTERIOR,
Washington, August 8, 1935.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The Supreme Court of the United States in the Parker Dam decision (*United States v. State of*

Arizona) indicated that Section 4 of the Act of June 25, 1910, 36 Stat., 835, is applicable to irrigation projects constructed under the National Industrial Recovery Act, and this report upon the Milk River storage project (known also as the Chain Lakes Storage project) is made to you under said statute of 1910 and under Subsection B of Section 4 of the Act of December 5, 1924, 43 Stat. 701.

Section 4 of the Act of June 25, 1910, provides, in effect, that after the date of that act no irrigation project to be constructed under the act of June 17, 1902, 32 Stat. 388, and acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924, 43 Stat., 701, provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

Under date of August 24, 1933, I approved an allotment of \$2,000,000 for the construction of upstream storage on the Milk River, Montana. The water developed in the proposed reservoir will be used on some 126,000 acres of land, embraced in the Milk River Reclamation project. The Malta, the Glasgow, the Harlem, the Zurich, the Paradise Valley and the Fort Belknap Irrigation Districts are arranging to enter into contracts with the United States to pay the cost of the proposed reservoir, with a capacity of 150,000 acre feet.

The Milk River project was authorized in 1903 and construction began in 1905. The water supply is obtained from the St. Mary Lakes, Swift Current Creek and Milk River.

There is need of a supplemental water supply upon the lands in these six districts, as in recent years losses have been suffered because of an inadequate supply.

Studies which have been made by the Bureau of Reclamation indicate that the water supply is adequate for the proposed reservoir, that the construction of the proposed dam is feasible from an engineering standpoint, and that the dam can be built within the cost of \$2,000,000 which the six districts are to agree to pay.

The lands in the six districts are not held at unreasonably high prices since the amount of unentered public land in the vicinity tends to prevent a large rise in land prices. Also the region is a sub-arid one and in some seasons crops can be raised without irrigation. This and the necessity of paying construction charges on the irrigated land tend to check any unreasonable speculation in land values.

I find that the project is feasible, that the land to be watered thereby is adaptable for actual settlement and farm homes, and

that the landowners benefited by the project will be able from the agricultural produce of the lands irrigated by the reservoir to return the cost of the development to the United States.

I recommend that the project be approved and that necessary authority be issued to this Department to make contracts for the construction of the project and to proceed with the work.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved (Undated ²)

(Signed) FRANKLIN D. ROOSEVELT.
President.

SACO DIVIDE UNIT

OFFICE OF THE SECRETARY,
Washington, March 11, 1941.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: The Interior Department Appropriation Act of 1940 contains an item of \$5,000,000 from which allocations may be made by you:

For construction, in addition to labor and materials to be supplied by the Work Projects Administration, of water conservation and utilization projects * * * in the Great Plains and arid and semi-arid areas of the United States * * *

The appropriation was continued in the Interior Department Appropriation Act of 1941 and the money made available until expended. All expenditures from the appropriation, and as much of the expenditures from the Work Projects Administration fund as the President determines, are to be considered reimbursable. Hereinafter the appropriation item will be referred to as the "Water Conservation Appropriation."

PROJECT PLAN

The Milk River project on the Milk River in Blaine, Phillips, and Valley Counties, Montana, was brought under irrigation by the Bureau of Reclamation in the year 1911. The Fresno Dam on

² Signed copy returned to the Secretary of the Interior on August 15, 1935.

the Milk River above the project lands was recently completed by the Bureau to provide supplemental water storage for the project and for adjacent lands. One of the main canals of the project has a larger capacity than is needed for the lands in cultivation and the community has been urging for many years that an additional area of 9,400 acres of fertile, but arid lands lying above this canal in the so-called Saco Divide unit be brought under cultivation. The proposal is a desirable one. It is recommended for construction by the Northern Great Plains Committee in its 1938 report to you. However, the cost of the new work plus the proportionate cost for the works already constructed, including Fresno storage, made the plan infeasible until the Congress passed, and you approved on October 10, 1940, Public No. 841, entitled "An act authorizing allocation of funds for the construction of the Saco Divide unit, Milk River project, and for other purposes." This act provides that the part of the cost of the Fresno Dam and Reservoir allocated to the unit and the new construction shall be repaid in accordance with the provisions of the water Conservation Appropriation, and that the cost of the other common facilities of the Milk River project allocated to the Saco Divide unit shall be repaid in not to exceed 20 annual installments, the first to accrue not later than the year following the last installment due and payable for Fresno storage and the new construction.

The lands of the Saco Divide unit, comprising 9,400 acres, are situated between Beaver Creek and Milk River near Saco, Montana, in Phillips County. They lie above the Nelson South Canal of the Milk River project and are planned to be irrigated by pumping from this canal which will be slightly enlarged for a distance of 10 miles. Water for irrigation will be raised a maximum height of 85 feet and will be conveyed to the farms by a lateral system approximately 30 miles in aggregate length. Electrical energy for pumping is expected to be obtained from the Montana Power Company or from the plant now being installed at Fort Peck Dam, and will be delivered by transmission lines already in existence or to be erected by the Bureau of Reclamation with funds specifically appropriated for that purpose.

The principal crops which will be raised on the project will be forage and small grains to be used in the support of the livestock industry. The main line of the Great Northern Railroad passes through Saco a few miles from the project, thus providing access to markets. It is planned to divide large land holdings into farm units of more desirable sizes and to settle a part of the project with destitute drought-stricken farmers.

The project will contribute toward the solution of problems arising out of interstate movements of agricultural populations by providing farms for farm peoples who have been forced to leave other submarginal farm areas, and by stabilizing the farm economy of the farm areas comprising the unit. The project will also contribute toward the solution of the unemployment problem by providing considerable employment in its construction stages, and should contribute to the permanent solution of this problem in the vicinity of the unit by the stabilization of its agricultural

economy. The project will further serve materially to put to use waters that are being and can be developed through the works of the Milk River project, and will result in the further and better conservation and use of soil and moisture.

PARTICIPATION OF FEDERAL AGENCIES

It is proposed that the Bureau of Reclamation will construct the irrigation works. As the unit will use the irrigation facilities of the Milk River project, it is also proposed, subject to change, that the Bureau of Reclamation will operate the irrigation works after they are built and negotiate contracts with the water users for the repayment of construction charges. The Department of Agriculture plans to purchase the excess lands, divide them into economic sized units, and settle them in part with drought-stricken farmers. It also expects to level the rough lands and to dig the necessary farm ditches. The Work Projects Administration is expected to provide most of the labor and a small amount of materials, supplies and equipment. A camp from the Civilian Conservation Corps may be used if there is not sufficient labor from the relief rolls available for the efficient construction of the project. Letters from the Department of Agriculture and the Work Projects Administration, commenting on their prospective participation, are enclosed. It is recommended that the funds requested by the Department of Agriculture for the acquisition of agricultural lands be transferred directly to the Department of Agriculture. It is planned that the Department of Agriculture will be reimbursed for all other services in connection with the project by transfers or advances from the funds made available to the Bureau of Reclamation.

ESTIMATED COST AND FINANCING PROCEDURE

The total estimated cost of construction, land acquisition, and land development is \$1,075,000. The Bureau of Reclamation plans to use \$595,000 of this amount for the construction of irrigation works. The Department of Agriculture expects to spend \$330,000 for settlement and land development, and \$150,000 for land acquisition. Funds amounting to \$235,000 for construction and \$350,000 for land acquisition and development, totaling \$585,000, are expected to be allotted from the Water Conservation Appropriation. Of these amounts, all are to be repaid by the water users in accordance with the provisions of the acts previously mentioned, excepting \$25,000 which will be credited to the project after it is built through the transfer or sale of equipment used in construction. It is noted that the enclosed letter from the Work Projects Administration mentions the figure of \$560,000 as the amount to be allotted from the General Funds. This includes only the amount to be repaid by the water users. The Work Projects Administration has advised that it is agreeable to the use of the total allotment of \$585,000 for the purposes indicated. The re-

maining \$490,000 of the total estimated cost is the amount of Federal funds which is expected will be expended by the Work Projects Administration, or the Civilian Conservation Corps, or both, for construction and land development. A tabulation giving the breakdown of the estimated cost and the proposed financing procedure is attached. If forces from the Civilian Conservation Corps are used, the amount to be expended by the Work Projects Administration and the Civilian Conservation Corps is estimated to be equal to that shown for expenditure by the Work Projects Administration. However, the breakdown under the various features will probably not be the same due to the difference in administrative procedures of the two agencies and the legislation which applies to them.

CONDITIONS PRECEDENT TO CONSTRUCTION OR OPERATION

It is contemplated that actual construction will not be started until the Department of Agriculture has made sufficient progress in its effort to obtain control of the land at prices which do not exceed the appraised valuation to insure the successful operation of the project.

Water will not be delivered until repayment contracts have been negotiated and agreements have been obtained to reduce land holdings to units of irrigable lands sufficient in size for the support of a family, but not exceeding 160 acres of irrigable land in one ownership. These agreements covering the sales of excess lands will provide also that if sales are made in excess of the appraised values of the excess lands, as determined by the Federal Government, a percentage of the excess to be determined by the Government shall be paid over to the United States for application on the construction charges against such land as a condition to the right of such land thereafter to receive water from the unit supply.

RECOMMENDATIONS

I recommend that the construction, repayment negotiations, and project operations be conducted by the Bureau of Reclamation, and that the land development program and the arrangements for settlement, including the acquisition of agricultural lands, be undertaken by the Department of Agriculture.

I recommend that an allocation of \$435,000 from the Water Conservation Appropriation be made to the Department of the Interior, Bureau of Reclamation, and that the allocation from the Water Conservation Appropriation for land acquisition, amounting to \$150,000 be made to the Department of Agriculture. I also recommend that the Work Projects Administration be requested to give prompt consideration to project applications which will be filed by the Bureau of Reclamation to obtain the assistance of that agency in the construction of the Saco Divide unit.

I recommend that by your approval of this report you determine that the United States shall not be reimbursed for the expendi-

tures by the Work Projects Administration and the Civilian Conservation Corps.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE.

Approved April 11, 1941.

(Signed) FRANKLIN D. ROOSEVELT,
President.

DODSON PUMPING UNIT

OFFICE OF THE SECRETARY,
Washington, February 2, 1944.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: An investigation has been made of the Dodson Pumping Unit of the Milk River project involving the irrigation of approximately 1,200 acres of land in Phillips County, Montana, and pursuant to the authority of the Act of August 11, 1939 (53 Stat. 1418), as amended (herein called the Act), I submit this report on the proposed project and request your approval of the findings, recommendations, and certifications contained herein.

PROJECT PURPOSE

The primary purpose of the proposed project would be to provide new works supplementary to the existing Dodson North Canal, so that water could be made available to 1,200 acres of new land, lying north of Dodson, Montana, on the north bank of the Milk River. Immediate development of the lands in the unit would provide a means of increasing the production of agricultural products now vitally needed. After the war it is believed that the unit would contribute toward the solution of problems arising out of interstate movements of agricultural populations by providing new homes and opportunities for additional farm families.

THE PLAN

The water supply would be made up of direct-flow water from

the Milk River supplemented with storage water from the existing Fresno reservoir of the Milk River project.

The water would be taken from the Milk River at the existing Dodson Dam and conveyed through the Dodson North Canal for about one mile, thence through a one-half mile feeder canal to the pump site. From this point water would be raised to a new main canal from which it would be distributed within the unit. Structures contemplated for the development would consist of a transmission line, a pumping plant, a culvert, a metal flume with timber supports, and the usual checks, turnouts, wasteways, small bridges, and similar features.

The project works would be supplemental to the storage works heretofore built by the Bureau of Reclamation under contract with the irrigation districts of the Milk River project under the Federal Reclamation Laws. An adequate supply of water for the lands to benefited by the proposed works is believed to be available.

Changes in these general plans may be found necessary, but it is expected that any changes will be of a minor nature and will neither alter the general objectives of the proposed project nor result in material departures from the present findings, predicated on the present plans therefor.

PARTICIPATION OF FEDERAL AGENCIES

The Bureau of Reclamation would construct the transmission line, pumping plant, culvert, canal system, and other necessary and appurtenant structures, and, subject to change, also would operate the system after it is built. The Bureau would negotiate contracts with the water users for the repayment of the reimbursable construction charges.

The War Food Administrator, acting in the stead of the Secretary of Agriculture, has transmitted a letter which is enclosed, indicating his approval of the proposed project and the extent of the proposed participation by the Department of Agriculture. From this letter it will be noted that the War Food Administrator concurs in my belief that the construction would be justifiable as an aid in the production of needed agricultural products.

Services, labor, materials, supplies, equipment, and similar items which may become available through the Selective Service System, Prisoner of War Camps, or other Federal agencies may be utilized under the terms and conditions fixed by such agencies, if, in my opinion, such use would effectively expedite construction of the proposed project.

PARTICIPATION OF NON-FEDERAL AGENCIES

Local interests requesting the development of the area indicate that, if requested, they would form or become part of a suitable organization with which to contract with the Government for the repayment of that part of the construction cost which is determined to be reimbursable. The water users benefited by the

work of the Department of Agriculture would be required to repay the reimbursable money expended in that work in accordance with the Act. Aid which may be offered by local interests probably would be accepted.

ESTIMATED COST AND FINANCING PROCEDURE

The cost of the project works which would be undertaken by this Department would be \$62,000. The new lands would also assume an obligation of \$60,000 as their proportionate share of the cost of works already constructed, these works comprising principally Fresno storage, Dodson Dam and the Dodson North Side Canal. Thus, the total cost of the proposed project would be \$122,000. In connection with the development, the Department of Agriculture would undertake activities pursuant to Section 5 of the Act which are estimated to cost approximately \$84,000. The activities of both Departments would be financed with monies heretofore appropriated for Water Conservation and Utilization projects. The total cost is estimated to be approximately \$206,000.

The ability of the prospective water users on the project to repay construction costs is dependent to a large extent on the amount which they must pay for electrical energy for irrigation pumping. Initially, pumping power would be obtained from the Montana Power Company, probably at an average rate of about \$0.015 per kilowatt-hour. At this rate the water users could make a total annual payment of about \$420. After the war, it is believed that power may be made available from Fort Peck at a rate as low as $2\frac{1}{2}$ miles per kilowatt-hour. At the latter rate, the water users could make an annual repayment of approximately \$1,836. Assuming that Fort Peck power at that rate becomes available by 1951 and that a maximum development period of 10 years from completion of construction is permitted, it would mean that the water users could pay an annual installment of \$1,836 for a full 40-year period, resulting in a total payment of \$73,440, in addition to the cost of works heretofore built. On these assumptions, the most favorable repayment situation is presented.

If, on the other hand, the average cost for pumping power were to remain at the comparatively high rate of \$0.015 per kilowatt-hour throughout the repayment period, the water users could pay a total of \$16,800, in addition to the cost of works heretofore built. This would be the least favorable repayment situation.

Since it is impossible to forecast what the situation as to the various factors bearing on repayment will be at the time the repayment contract is made, it is expected that a repayment plan fixed by the contract will provide for repayment within the two limits above stated, and will provide for adjustment as required by changes in the controlling factors of the rate for power and length of the development period. All net costs of the additional works which would be hereby authorized, in excess of the amount finally determined to be repaid by the water users within the limits here stated, would be treated as non-reimbursable. Construction repayments to the extent of \$60,000 covering a proportionate

share of the works heretofore built would be covered into the reclamation fund.

It is estimated that the water users could repay \$63,000 for the costs of the work proposed by the Department of Agriculture. All costs in excess of this amount would, as authorized by the Act, be treated as nonreimbursable.

Sufficient funds for the initiation of the proposed work have been appropriated and are now available for allotment.

SIZE OF FARM UNITS

Since the exact size may vary over the proposed project area in accordance with the varying conditions of the lands, limitations on the various holdings will be established after more complete and final surveys have been made. The maximum size of holding in a single ownership, however, should not exceed 160 acres of irrigable land. In this connection, considering the problems attendant on farm operation during the war and the need for the greatest possible production of agricultural products with the available farm labor supply, I expect to determine that for the duration of the war the limitations on the delivery of water will not be applicable to existing land holdings which exceeded in area the maximum to be established for any farm unit.

FINDINGS, CERTIFICATIONS, RECOMMENDATIONS

Based upon the report covering the engineering and economic aspects of the work proposed to be accomplished by the Bureau of Reclamation, I find and certify that:

1. The proposed project has engineering feasibility.
2. The total estimated cost, exclusive of the proportionate share of the cost of irrigation works already constructed, is \$62,000.
3. The estimated cost which properly could be allocated to irrigation is \$62,000.
4. The water users probably could repay in accordance with the requirements of Section 4 of the Act, between \$16,800 and \$73,440, depending on power rates for irrigation pumping and the length of the development period, in addition to the payment of \$60,000 as the proportionate share of the cost of works heretofore built under the Federal reclamation laws.
5. No part of the estimated costs properly could be allocated to municipal or miscellaneous water supply or power.
6. No part of the estimated costs properly could be allocated to the irrigation of Indian trust and tribal lands.
7. No part of the estimated costs properly could be allocated to flood control.
8. The proposed construction is justifiable as an aid in the production of needed agricultural products.

If you approve the project, it is planned to proceed immediately with matters relating to land acquisition, water rights, and repayment contracts so that the requirements of the statutes may be met as promptly as possible. The project has heretofore been submitted to the War Production Board for clearance for com-

mencement of construction and procurement of materials needed for construction.

On the basis of the foregoing report and findings, I recommend that you approve this project for construction.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE,
Approved March 17, 1944.

(Signed) FRANKLIN D. ROOSEVELT,
President.

MINIDOKA PROJECT

IDAHO-WYOMING

The Minidoka project was authorized by the Secretary under the Reclamation Act of 1902 on April 23, 1904; examined and reported upon by a Board of Army Engineers and approved by the President on January 5, 1911, in accordance with the act of June 25, 1910 (36 Stat. 836).

The Gooding Division, originally called Gravity Extension unit, was found feasible by the Secretary on July 2, 1928, and approved by the President on July 3, 1928, pursuant to section 4 of the act of June 25, 1910 (36 Stat. 836), and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702).

The Upper Snake River division¹, originally called Upper Snake River Storage project, was found feasible by the Secretary on September 6, 1935, and approved by the President on September 20, 1935, pursuant to the acts referred to in the above paragraph.

The North Side Pumping division and the American Falls power plant were authorized by the act of September 30, 1950 (Pub. Law 864, 81st Cong.).

UNITED STATES GEOLOGICAL SURVEY,
March 31, 1904.

Mr. F. H. NEWELL,
Chief Engineer, U. S. G. S., Washington, D. C.

SIR: The undersigned have examined the locality, surveys, plans and drawings of the proposed irrigation structures on Snake River, near Minidoka, Idaho, and submit thereon the following report:

The project contemplates the construction of a diverting dam 50 feet high in the gorge above Howell's Ferry, and the diversion of water on both sides of the river into canals for the irrigation of lands below.

The surveys show that it is possible to irrigate by gravity about

¹ The *Upper Snake River Division* was initiated under the terms of the National Industrial Recovery Act of 1933.

68,000 acres of good land. In addition to this, it is possible to divert about 3,000 cubic feet of water per second which is appropriated by vested interests below, and by turning this back into the river, generate over 10,000 horsepower, which can be used to pump an ample supply of water to about 53,000 acres of land lying above the gravity canals making a total area irrigable from this project of about 120,000 acres.

The report of Mr. D. W. Ross attached hereto, describes this project more in detail, and with the main features of scope and plans, we are in essential agreement. We have directed the modification of some minor features of the designs and estimates, and directed further examinations that may have bearing on the ultimate results, and cost per acre. The examinations and plans, however, are well and wisely perfected for the main features, and we are decidedly of the opinion that the project is feasible and recommend its early construction. To this end we have prepared specifications covering the dam and headworks, which we enclose, and recommend that 500 copies be printed, for distribution to applicants.

We also enclose a form of advertisement, which we recommend be inserted as soon as practicable in the following periodicals:

Engineering News
Engineering Record
Government Advertisers
Salt Lake Tribune and
Portland Oregonian.

The drawings will be forwarded as soon as some necessary alterations can be made.

We recommend that the Honorable Secretary of the Interior be requested to set aside the sum of \$2,600,000 from the Reclamation fund for the construction of the Minidoka Project.

(Signed) A. P. DAVIS.
H. N. SAVAGE.
GEO. Y. WISNER.

UNITED STATES GEOLOGICAL SURVEY,
April 15, 1904.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: Surveys and investigations have been conducted in southern Idaho on Snake River, at what is known as the Minidoka project, described in the First and Second Annual Reports of the Reclamation Service, and in the quarterly statement and estimates prepared for your approval.

On March 21 Mr. D. W. Ross, the District Engineer in charge, reported upon the project, this report being referred to a board of engineers consisting of Messrs. A. P. Davis, H. N. Savage

and George Y. Wisner. On March 31, 1904, this board made a formal report, recommending the construction, and the insertion of advertisements calling for bids to be opened June 22, 1904. It is important that construction begin at an early date on a dam in Snake River above Howell's Ferry, about 6 miles south of the railroad station of Minidoka on the Oregon Short Line R. R. Canals for the diversion of water are to be taken out on both sides of the river.

The surveys show that it is possible to irrigate by gravity about 68,000 acres of good land; in addition to this, it is possible to generate over 10,000 H.P., which can be used to pump and supply water to about 53,000 acres of land lying above the gravity canals.

It is believed that the cost of irrigation will be about \$22 per acre; similar lands, when reclaimed, are selling at from \$40 to \$100 per acre. The work of reclamation is divided into two or more parts; the first division, including the dam and a portion of the canals in heavy rock work; the second division is for the main distributing system which can be let in small contracts to actual settlers.

The matter has been discussed somewhat fully in its broad features with citizens of Idaho, and by letter of April 6 the Governor of the State transmits a statement signed by a great number of prominent citizens, stating among other things, that: "We hereby endorse and recommend the approval of that (Minidoka) project, as tending in the largest measure to promote the development of the whole upper Snake River Valley." Copies of this statement have, I believe, been presented to you by the Congressional delegation from Idaho.

Since this project meets the approval of the Reclamation Service, and also of the prominent officials and citizens of Idaho, I respectfully recommend that construction be begun at once, and that suitable advertisement be inserted, calling for bids for the construction of the dam and principal works. Also that the specifications and other necessary papers be printed as soon as possible, in order to enable construction to proceed during the present year.

It is also recommended that the sum of \$2,600,000 be provisionally set aside for the construction of this work. This amount will not be needed for a number of years, as it includes the extensions which will probably not be built until the first portion is in operation. It appears advisable, however, to set this fund aside tentatively.

Very respectfully,

(Signed) CHAS. D. WALCOTT,
Director.

OFFICE OF THE SECRETARY,
Washington, April 23, 1904.

THE DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: You reported to the Department on the 15th instant in the matter of the proposed Minidoka Project, Idaho, under the reclamation act of June 17, 1902—32 Stat., 388.

It is shown by your report that the project is a feasible one, that it is endorsed by citizens and officials of Idaho as tending largely to promote the development of the whole upper Snake River Valley and that it meets the approval of the Reclamation Service.

You have stated that about 68,000 acres of good land can be irrigated by gravity, that the cost of irrigation under this project will be about \$22 per acre and that similar lands, when reclaimed, are selling at from \$40 to \$100 per acre.

Your recommendations are that construction be begun at once, that suitable advertisements be published calling for bids for the construction of the dam and principal works, that specifications and other necessary papers be printed and that the sum of \$2,600,000 be provisionally set aside for construction.

After consideration of the matter, I approve all of your recommendations and the sum of \$2,600,000, or so much thereof as may be necessary, is hereby set aside from the fund provided by the act of June 17, 1902—32 Stat., 388—tentatively, for use in construction and you are hereby authorized to take such action under the law as may be essential to carry this project to a successful conclusion.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

GOODING DIVISION (GRAVITY EXTENSION UNIT)

THE SECRETARY OF THE INTERIOR,
Washington, July 2, 1928.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The time has arrived for final con-

sideration of the construction of the Gravity Extension Canal of the Minidoka project.

The following preparatory steps have been taken:

1. An Act of Congress of January 12, 1927, (44 Stat., 934, 958) appropriated \$400,000 for the investigation and construction of the Gravity Extension Unit of the Minidoka Reclamation project, in Idaho. An act of March 7, 1928, Public No. 100, appropriated \$1,075,000 for continuation of construction of this project.
2. The economic investigation and engineering plans provided for in the above appropriation have been completed.
3. Money to pay for increasing the capacity of the first 3½ miles of the main canal has been provided by the parties interested in this increase.
4. Bids for the first section of the canal have been received. The one recommended for approval is below the engineering estimate.
5. An irrigation district has been created which embraces all of the privately-owned lands now irrigated, the partly developed land not irrigated and the public land susceptible of irrigation. This district has entered into a contract with the Government to repay the entire cost of this development in accordance with the terms of the Reclamation Act within 40 years.

Before contracts for the construction of this development can be let, it is necessary that a finding, required by Subsection B, Section 4, of the Act of December 5, 1924, as follows, be made by the Secretary of the Interior, and that construction be approved by the President as required by the Act of June 25, 1910:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

The engineering and economic investigations necessary to the preparation of a report under Subsection B disclosed the following facts. They seem to justify the immediate beginning of this development.

1. It will create a market for 400,000 acre-feet of water out of the now unsold capacity in American Falls reservoir, and will secure for the Government an obligation for the repayment of \$2,000,000 of the construction cost of this storage. Without some such development this unused capacity of the reservoir will bring no return on the construction cost.
2. It will give an ample and an assured water supply to 80,000 acres of land which now have an uncertain and inadequate water supply. Doing this will create a stable and prosperous agricultural community, where now the settlers are menaced by impending failure and have suffered serious financial loss. A full water supply will be provided for 16,000 acres of land, scattered through the settled and cultivated area, now provided with supply canals and lateral ditches, with the land partly leveled. The existence of roads, schools, and social advantages will make this land especially attractive to settlers, and it is believed it will be settled and irrigated as soon as water is available.
3. The canal will command and be able to supply irrigation water by gravity for 20,000 acres of fertile public land. It will be built large enough to supply water to this land. While there may be no immediate return from this expenditure, the cost will be less than half the cost of the storage which is now idle and which this development will bring into use.

ENGINEERING FEATURES

It is proposed to construct a main canal diverting water from Snake River at Milner dam, 25 miles east of Twin Falls, Idaho, and running northwesterly for a distance of 70 miles to an intersection with a constructed canal now serving lands in the vicinity of Gooding, Idaho. The latter canal is part of a system constructed under the Carey Act 20 years ago for the irrigation by gravity of some 80,000 acres of land with water from Big Wood and Little Wood rivers, and for which the present water supply has been found uncertain and inadequate. The proposed canal will permit the waters from Big and Little Wood rivers now being used below its level to be devoted exclusively to the irrigation of 36,000 acres of higher lands, and will so augment the water supply for these higher lands as to permit profitable cultivation. In addition to this indirect irrigation the proposed Government canal would be large enough to irrigate directly 80,000 acres of land, of which 60,000 acres are now in a position to be reclaimed and cultivated and 20,000 acres of public land, hereinbefore referred to. The expenditure of \$800,000 for laterals for this public land will not be made until settlement is assured.

No diversion dam will be required as the Milner dam, belonging to the Twin Falls South Side and Twin Falls North Side Canal Companies, elevates the water to the required level. Under arrangements now made this elevation is provided without cost to the Government.

The first $3\frac{1}{2}$ miles of the canal will have a capacity of 2,750 second feet. Of this, 1,000 second feet will be used by the North Side Twin Falls Canal Company, which has a canal immediately adjacent of inadequate capacity. This section of the main canal will be in a deep cut and largely rock. Much of the remaining 64 miles of canal is in rocky country with capacities decreasing from 1,600 second feet to 400 second feet. The last 3 miles of the canal pass through a basaltic region devoid of soil where a concrete flume 11 feet wide and 7 feet high will be required.

WATER SUPPLY AND DRAINAGE

The water supply will be obtained from Snake River, the natural flow of which in the irrigation season will be fully used, in low years, by rights initiated in advance of this project. The project lands will, therefore, have to depend on water stored in the American Falls reservoir. Four hundred thousand acre feet, or 5 acre feet of water for each acre of land, have been set aside for this purpose. The storable winter flow, together with flood waters storable in most years and in part carried over from year to year, will cause the reservoir to fill, except in the very dry years. Irrigation shortages will be infrequent and of minor extent.

Only minor drainage works are likely to be required.

CONSTRUCTION COST

Main Canal	\$3,800,000
Miscellaneous minor features.....	400,000
Total	4,200,000

To this will have to be added at a later date \$800,000 for the construction of laterals to irrigate the public land which can be supplied by gravity from this canal. Storage in American Falls reservoir at a cost of \$2,000,000 has already been provided.

CROPS

On the partially irrigated lands to be included in the project and on other lands in this locality, the prevailing crops are alfalfa, sugar beets, corn and grain, with an estimated average annual crop production under present conditions of \$35 per acre. All of the lands lie within reasonable distances of the main and branch lines of the Union Pacific railway system. Over 400,000 acres of irrigated land are now successfully cultivated in the immediate vicinity.

LAND PRICES

Under the reclamation laws no more than 160 acres of patented land in single ownership can receive a Government water supply, such excess areas in private ownership being denominated "excess lands." The excess lands of this project have been appraised by a competent board. The contract with the district and contracts with owners of excess lands require that excess lands be disposed of at or below the appraised valuations. Settlers who are allotted public land will be required to have some capital and farming experience. Application of these principles to this project will tend to eliminate some of the obstacles to farm development of the past.

The lands now under irrigation are fairly well improved and are growing alfalfa, clover, small grains, tame irrigated pastures and potatoes. High-priced crops are not extensively grown because of a lack of late water. Carey Act construction charges on these lands are fully paid. Operation and maintenance charges are 95% paid. This area is well served by towns, railroads, roads, schools and churches. Considering the hardships which these people have encountered because of a lack of water, their morale and social conditions are excellent.

About 16,000 acres of new lands are interspersed with the improved and cultivated lands of this district. Lateral ditches to irrigate this land are built, and some of it was prepared for irrigation when it was, through court action, excluded from the district because of an inadequate water supply. With this water supply provided, the location of these lands in a settled community, with part of the improvements made, gives confidence

that they will be settled and irrigated within a reasonable time after the water is supplied, and that the irrigation charges will be paid within the time limits fixed by the reclamation laws.

The 20,000 acres of public land to be irrigated from this canal are fertile, but are unimproved and only about half the area has topography permitting group settlement and community development. The other half, about 10,000 acres, has an uneven surface with float rock and lava outcrops. Many farm units will be isolated, making road building and lateral construction costly. These units should have from 120 to 160 acres of irrigable land and should be used for sheep and cattle raising or dairying. They will require farmers having local experience. To insure the settlement and development of this public land and the payment of construction charges, roads should be built in advance of settlement and a part of the area in the section having isolated farms should be prepared in advance for irrigation. There is no provision in law at present for doing these things, nor any responsible guarantee that they will be done from local sources. The plans for this canal do not, therefore, contemplate the construction of laterals for this area until settlement is assured. The main canal would be built of ample size to provide water, but the expenditure of \$800,000 for laterals will be withheld until there was satisfactory assurance of a demand for the land.

ADAPTABILITY OF LAND TO SETTLEMENT AND FARM HOMES

The land embraced in the project is of good fertility. Good yields of all crops grown in this locality are assured. With care in the selection of settlers, with farms suitably improved and equipped, success in farming may be anticipated.

PAYMENT OF CHARGES

As before stated, all lands to be benefited by this construction have been organized into the American Falls Reservoir District No. 2 and a satisfactory contract has been prepared and voted by the owners of the private land, confirmed by court. It guarantees the repayment of a maximum of \$7,500,000. The benefits of this development have been apportioned to the different classes of land and duly confirmed by court with the new lands assessed to pay \$94 an acre, and the old lands to be provided with a partial water supply at \$51.70 an acre, this representing the cost of lands in the Carey Act both above and below the proposed canal.

Under the contract the district is obligated to repay construction costs on new lands within a period of 40 years and for the lands having a partial water supply within a period of 20 years. This would make the average annual payments on construction costs for new lands \$2.35 per acre per year and on the lands now irrigated and having a partial supply \$2.60 per acre per year. These costs, together with costs for operation and maintenance of the project system and other district costs, will make an annual

water charge of around \$4.50 per acre. This is higher than prevailing charges on projects of similar productiveness after readjustment of repayment contracts under the act of May 25, 1926. In view, however, of precautions being taken to curb land speculation, to obtain qualified settlers, and to create conditions which will hasten and cheapen the improvement of farms, it is believed the charges can be met.

It will be seen that this schedule provides for the return of the cost, not only of the new work to be done, but also of storage in American Falls reservoir which has been provided by the Government at an expense of \$2,000,000, and upon which the United States is now receiving no return and will receive no return until an irrigation system is constructed for the utilization of the stored water. The returns from the 20,000 acres of new land may be somewhat delayed, awaiting settlement, as the repayment does not begin until after the land is entered. As an offset to this, the laterals for the new land, estimated to cost around \$800,000 will not be constructed until prompt settlement and profitable cultivation are assured.

FINDING REGARDING FEASIBILITY OF PROJECT

It is believed that this development will mean a gain in income to the Reclamation Fund, and that the project is feasible from an engineering and economic standpoint, and I accordingly so find and declare.

In view of the urgent need of an increased water supply for an area of 80,000 acres, and the suitability of the 16,000 acres of new lands for immediate successful settlement, I recommend the approval of the Gravity Extension Unit of the Minidoka project, and the issuance of authority to proceed with its construction.

Very truly yours,

(Signed) HUBERT WORK,
Secretary.

Approved July 3, 1928.

(Signed) CALVIN COOLIDGE,
President.

UPPER SNAKE RIVER DIVISION

OFFICE OF THE SECRETARY,
Washington, September 6, 1935.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The evolution of irrigation in the Snake River Valley in Idaho is typical of most of the arid sections of western United States. Inexpensive irrigation works were constructed first and development was based upon the natural flow of rivers available during seasons of heavy runoff. As years went on, development of the farms brought more and more irrigable land under cultivation and created a demand for ever-increasing water supplies.

Under these circumstances, cycles of years of subnormal precipitation in the river watersheds—recurring at irregular intervals—caused much suffering and loss of property and demonstrated the need for storage works to equalize the river flow over years of high and low precipitation.

Jackson Lake reservoir, on the head waters of the South Fork of Snake River, and American Falls reservoir, in the lower Snake River Valley, have provided storage capacity for all irrigated lands of the Snake River Valley in southern Idaho except those lands now supplied with water for irrigation from the North Fork of Snake River. These lands, served by existing canals, and containing an area of approximately 100,000 acres, are sorely in need of storage to supplement their inadequate natural flow rights in the river. They have been organized into an irrigation district through which they stand ready to become obligated for the repayment of the cost of the storage works in installments over a period of 40 years.

Preliminary investigations have disclosed suitable reservoir sites and works proposed are estimated to cost not to exceed \$4,000,000 for several reservoirs and for a canal from Henry's Fork to the Teton River, the advance estimate of cost of the Island Park Reservoir being not to exceed \$2,000,000.

Under date of August 24, 1933, I approved an allotment of \$4,000,000 for the construction of such storage works on the North or Henry's Fork of Snake River, Idaho, and its tributaries, \$2,000,000 of which is now available. The storage water proposed to be developed thereby will be available for use upon about 100,000 acres of land under existing canals in the Fremont-Madison Irrigation District as now organized, and the irrigable area served by the proposed storage works may be largely increased if both

the Teton Reservoir and the Island Park Reservoir are adopted for construction. Most of these lands are already under cultivation and able to start the repayment of cost of such storage immediately.

It is proposed to have the contract for repayment of such cost follow the provisions of the act of June 17, 1902 (32 Stat., 388) and acts amendatory thereof or supplementary thereto, and particularly the act of February 21, 1911 (36 Stat. 925) and the act of June 16, 1933 (48 Stat. 195), and the contract will contain provisions aimed to reduce or prevent speculation in lands having the benefit of such storage water.

I find that the project is feasible and that the lands to be benefited by such storage are well adapted for actual settlement and farm homes, and that the agricultural productivity of such lands will in all probability return to the United States the cost of the development.

The construction of the works as proposed will furnish employment to large numbers now unemployed and further the purpose and intent of the act of Congress of June 16, 1933.

The Parker Dam decision of the Supreme Court of the United States (*United States v. State of Arizona*) indicates that Federal irrigation projects constructed under the provisions of the act of June 16, 1933, must be directly authorized by you under Section 4 of the act of June 26, 1910, 36 Stat., 835, and this report is made in accordance with said act of 1910 and under subsection B of section 4 of the act of Congress of December 5, 1924 (43 Stat., 701).

I recommend that the project be approved and that necessary authority be issued to this Department to proceed to contract for the construction of such works and for the repayment of the cost thereof by the landowners benefited.

Sincerely yours,

(Signed) CHARLES WEST,
Acting Secretary of the Interior.

Approved September 20, 1935.

(Signed) FRANKLIN D. ROOSEVELT,
President.

AMERICAN FALLS POWER PLANT

[Extract from] Senate Report 1116, 81st Cong., 1st sess., on S. 2195.

* * * * *

PROJECT PLAN

The Palisades Dam, to be situated in the channel of Snake River, will create a storage reservoir with an active capacity of 1,277,000 acre-feet. It will lie between the American Falls Reser-

voir with a capacity of 1,700,000 acre-feet, situated downstream, and the Jackson Lake Reservoir with a capacity of 800,000 acre-feet, situated upstream in Teton County, Wyo.

Present reservoirs in the Snake River Basin above and including American Falls have an aggregate storage capacity of 2,700,000 acre-feet. The use of this storage has, historically, been largely to provide desirable seasonal distribution of the run-off rather than to provide cyclic hold-over storage for years of low stream flows. The ultimate objective is coordination of all storage units in a plan for river regulations which will provide the greatest benefits for flood control, generating of hydroelectric power, and hold-over storage for irrigation. Such operations will require the consent of water users to transfer their storage and direct-flow rights to the coordinated system, without loss of identity of priority. The improvement in methods of forecasting run-off and flood stages indicate that large increases in the total usable water supply can be had if the "ultimate objective," above defined, is achieved. The testimony at the hearings was to the effect that progress has been made and that no serious difficulty was anticipated in bringing about the consents required for the coordinated operation of all major storage and diversion works. By this means, the wastes of water referred to by the Secretary will be eliminated.

The operation of the reservoirs to reduce flood damages in the valley will be performed by the Bureau of Reclamation in conformity with rules and regulations of the Chief of Engineers, Department of the Army (sec. 7 of the Flood Control Act of 1944, 58 Stat. 890).

The bill would authorize the installation of a power plant at American Falls Dam with a capacity of 30,000 kilowatts. The installed power capacity at the Palisades Dam would be authorized to a maximum capacity of 112,500 kilowatts.

The storage capacity in American Falls Reservoir was sold under contracts, during the early stages of development of the Federal reclamation projects downstream, to water users on these and to privately constructed irrigation enterprises, with the exception of 433,000 acre-feet. However, since the reservoir was completed drought conditions and increases in areas irrigated prompted the Bureau of Reclamation to lease the unsold space to water users who had direct-flow rights only. Such leases have resulted in preventing enormous crop losses. However, more storage is required for firming the run-off to meet increased irrigation demands for both new and supplemental water supplies. While it appears that the authorization of the American Falls Reservoir project contemplated the reservation of the unsold space for the supply of new lands, this is not practicable. Accordingly, 315,000 acre-feet of space will be sold to lessees who have used it since 1928, 47,593 acre-feet will be allocated to 77,000 acre-feet of the North Side pumping division of the Minidoka, and 71,000 acre-feet to 30,000 acres on Michland Flats. Additional supplies for these two areas will be available from wells and Palisades Reservoir. Only the first-named unit would be authorized

by the bill, and the use of ground waters is to be heavily relied upon.

Section 4 (a) of the bill, H. R. 5506, provides that continuation of the construction of Palisades Dam beyond December 31, 1950, will be contingent upon the consummation of water-saving contracts which will in the opinion of the Secretary of the Interior, produce average annual savings of 135,000 acre-feet. This amount was set forth particularly in House Document 457, *supra*.

The testimony of Bureau of Reclamation officials produced the following financial data:

(a) Construction costs, 1949 price level:	
Palisades Dam, Reservoir, and power plant.....	\$76,601,000
North Side pumping division.....	11,395,000
American Falls power plant.....	6,600,000
Total cost	94,596,000
(b) Allocations of construction costs:	
Reimbursable:	
Irrigation	28,866,100
Power	32,401,300
Subtotal	61,267,400
Nonreimbursable:	
Flood control	22,733,300
Fish and wildlife.....	3,800,900
Recreation	6,296,000
Total	94,097,600

¹ Without deduction of storage credits from leases.

The bill would reauthorize the Palisades Reservoir project. The other units were not previously authorized. All of the water users can repay their obligation in 40 years, and costs assigned to be repaid from net power revenues will be repaid in 50 years after all power units are in operation. Your subcommittee has considered the flood hazards in the valley, the need for power for commercial uses and for irrigation pumping, which, together with other benefits show a benefit-cost ratio of 1.37 and 1. The irrigated area affected will exceed 700,000 acres.

Full agreement exists between the compact commissioners of the States of Idaho and Wyoming upon a division of the waters of the Snake River at the Idaho-Wyoming State line. While the compact has not been formally prepared and signed by the compact commissioners, neither of them anticipates objections to prompt ratification by the States. A special session of the Idaho Legislature will convene early in 1950. Wyoming's legislature has not as yet scheduled a meeting prior to its next regular session in January, 1951. The amendment proposed by the Senate committee therefore preserves the status quo until a compact is approved by the Congress.

With no increase in the total authorization for the project it is recommended that provision be made for the construction at Jack-

son, Wyo., of a fish hatchery adequate to meet the ever-growing present demand and the tremendous requirement for such service upon completion of the Palisades Dam and Reservoir.

There is no problem of site. Lands are now available within the fish and wildlife refuge at Jackson.

To supply 400,000 legal-sized fish and 1,000,000 fingerling trout annually, it is proposed that the \$76,601,000 authorization include the \$365,000 for the hatchery construction.

Jackson is the center of a recreational area of vast size and great attraction to tourists and sportsmen. The Grand Teton National Park, the Jackson Hole National Monument and the Teton National Forest surround the hatchery site and would be supplied.

A small hatchery at Daniel, Wyo., does not have the capacity to supply the area.

Mackinaw trout fishing, widely noted on Jackson Lake, has declined by reason of the catch exceeding the normal increment of fish as greater numbers of sportsmen visit the area.

It is obvious that present demands cannot be met and that the increased requirements of the Palisades Reservoir will be proportionally excessive.

Further detailed information is carried in the favorable report of the Department of the Interior to the chairman of the Senate Committee on Interior and Insular Affairs, under date of August 10, 1949, which report is hereinbelow set forth in full and made a part of this report.

DEPARTMENT OF THE INTERIOR,
Washington, D. C., August 10, 1949.

Hon. JOSEPH C. O'MAHONEY,

*Chairman, Committee on Interior and Insular Affairs,
United States Senate, Washington, D. C.*

MY DEAR SENATOR O'MAHONEY: You have asked for an expression of our views on S. 2195 and S. 2203, bills to authorize the Palisades Dam and Reservoir project, to authorize the North Side Pumping division and related works, to provide for the disposition of reserved space in American Falls Reservoir, and for other purposes. The bills in question are identical.

We recommend that legislation along the lines proposed by these bills be enacted.

Enactment of this legislation would constitute a long step forward in the development of the water resources of the upper Snake River Valley in Idaho and in the settlement of an extremely complicated water-right problem in that area. The legislation and actions taken in its fulfillment will long be looked on as an example of the ability of contending groups of water users, acting in coop-

eration with the Federal Government, to resolve difficult water-use problems.

The bills deal with several major, but closely related, physical undertakings, these being Palisades Dam and Reservoir, American Falls Dam, and the proposed North Side Pumping division of the Minidoka project. These physical undertakings are all related in the solution of the water problems of the upper Snake River Valley. The problems arise because of the need for supplemental storage in the valley. This need will be met with the building of Palisades Dam and Reservoir, though this is but part of the solution. The whole solution requires the providing of authority with respect to the use of that reservoir and related existing storage facilities, and the making of appropriate arrangements under that authority.

A brief résumé of the problems involved and the negotiations with respect to them will show this interrelationship and the desirability, even necessity, of treating the major physical undertakings together in the proposed legislation.

Palisades Dam was initially authorized in 1941 (H. Doc. No. 457, 77th Cong., 1st sess.) on the basis of a finding of feasibility made by the Secretary under the provisions of section 9 of the Reclamation Project Act of 1939 (53 Stat. 1187). The construction of the project was regarded, however, at least administratively, as dependent on there being assurance of a minimum water supply through the curtailment of certain wasteful winter diversions in the upper Snake River Valley. A comprehensive study of water supply and use in that area was completed and a report on the findings was released in December 1946. Negotiations with the water users as to winter water savings and future repayment of the portion of the cost of Palisades Dam to be repaid by water users were begun immediately. The water users raised at the outset, however, the question as to the final disposition of the 433,593 acre-feet of reserved space in American Falls Reservoir then under lease to them.

The United States proposed that this reserved space continue to be set aside for the development of new lands in accordance with plans in contemplation when American Falls Reservoir was built in 1927. The present lessees of that space, however, argued that the entire space should be sold to them. The United States recognized the position of those water users as having some merit, but it was felt that there were sounder reasons for recommending the development of some 67,000 acres of new land—30,000 acres in the Michaud Flats area and 37,000 acres comprising the better public lands long under withdrawal for development as part of the North Side Pumping division of the Minidoka project. This proposition was a compromise, for it involved the development of but a portion of the lands under withdrawal for the North Side Pumping division. While the negotiations with the water users were going on, however, the possibility of developing ground water as a source of supply for a substantial portion of the North Side Pumping division was explored and the results held promise. This made possible a further compromise as to the use of American

Falls space. The compromise tentatively worked out provides for the disposal of 315,000 acre-feet of the total reserved space to the existing water users who have heretofore leased that space. The balance is to be allocated: 47,593 acre-feet to unit A of the North Side Pumping division and 71,000 acre-feet to the lands in the Michaud area which lies between Pocatello and American Falls.

The proposal to develop the North Side pumping division in a large part with ground water focused attention anew on the problem of the most suitable source of irrigation pumping power. The conclusion reached was that completion of the power installation at American Falls Dam was the answer because it is especially adaptable to seasonal production and would afford a good way of realizing on the investment initially made in power facilities when the dam was built. It also promises to afford the best way of providing for the continuation of a needed winter water-savings program through curtailment of winter power generation at Minidoka Dam and Shoshone Falls. Accordingly, the bills cover both authorization of the North Side pumping division and authorization of the power installation at American Falls as a primary source of pumping power.

The major purpose of each section of the bills and important aspects of the works covered thereby are discussed below.

Section 1 of each of the bills relates to Palisades Dam, with respect to which supplemental authority is needed. The dam, as now proposed to be built, is essentially the same as that initially authorized, although it is proposed now to increase the capacity of the outlet works to permit greater flexibility in flood-control operations and to increase the maximum power installation to approximately 112,500 kilowatts. The total cost of the proposed project estimated as of January 1, 1949, is \$76,601,000. The proposed allocations of these costs are covered fully in the supplemental report to which reference is made in the bill. The project, on the basis of such allocations and prospective returns, is regarded as financially feasible.

Two or three aspects of the proposed operating plan for the reservoir are unique and have a direct bearing on the allocation of costs, and, consequently, on pay-out. The flood control plan discussed in detail in appendix A of the allocation report has been worked out between the Bureau of Reclamation and the Corps of Engineers. That plan involves the joint use, on the basis of run-off forecasts, of all active space in the reservoir for irrigation and flood control purposes. The run-off forecasts would be improved by continuation and extension of the existing hydro-meteorological network. Such a plan justifies a substantially larger allocation to flood control than would be possible were but a portion of the reservoir space to be made available for flood-control purposes. The study of that plan, based on past years of record, indicates that the plan can operate without any substantial detriment to the total amount of irrigation storage water to be realized.

No account is taken of the increased allocation to flood control that might be justified when and if a more extensive reservoir sys-

tem for the control of floods on the main stem of the Columbia River, such as proposed in the report of June 28, 1949, of the Chief of Engineers, is authorized, but it is expected that at such time there could be reevaluation if authority in law for such a review is then extant.

The proposed allocation of project costs to fish and wildlife is in keeping with the policy established by the Congress in the act of August 14, 1946 (60 Stat. 1081), but in this instance is dependent upon 55,000 acre-feet of Palisades space being made available to the Fort Hall Indian Reservation as replacement storage for that which it now receives from Gray's Lake and on the actual establishment of Gray's Lake as a wildlife management area. The latter step will require, among other things, the acquisition of adequate rights-of-way.

The proposed allocation to recreation is regarded as justified because with Palisades Reservoir in operation it will become possible and desirable, from a water-savings point of view, to maintain Jackson Lake at full level throughout the tourist season. Only in extremely dry years would there be any substantial withdrawal from Jackson Lake during that season. In terms of tourist attraction in an area so widely known throughout the United States, this change of operating plan is regarded as capable of a high monetary valuation, which would adequately justify the proposed allocation of project costs to recreation. The basis of the valuation and allocation of project costs to recreation is explained in appendix C of the supplemental report.

All proposals of consequence with respect to Palisades Dam and Reservoir will be made effective through the adoption, by section 1 of the bill, of the specific recommendations incorporated by reference in the supplemental report approved by the Secretary on July 1, 1949.

Authorization of the North Side Pumping division of the Minidoka project will be effected by the provisions of section 2 of the bills. A full description of the project works and a discussion of the engineering and financial aspects of this undertaking appear in the Commissioner's report as approved and adopted by the Secretary on July 1, 1949. The primary source of pumping power suggested in that report is the power installation at American Falls Dam. At the pumping power rate assumed in the report, the proposed works are regarded as financially feasible, although, because of the relatively high estimated annual cost to water users, it is proposed, through adoption of the specific recommendations incorporated by reference in the report, to permit use of a repayment plan somewhat different from that now provided by section 9 of the Reclamation Project Act of 1939.

Section 2 of the bills covers, in addition to the North Side Pumping division, the completion of the long-deferred power installation at American Falls Dam and the treating of this and the Palisades power plant and related transmission system as one unit for pay-out and rate-making purposes. Power pen stocks were included in the dam when it was first built and it was then planned to complete the installation with a primary purpose being

to provide irrigation pumping power. There is attached a financial study (Financial Study of Proposed Completion of American Falls Power Plant) dealing with the American Falls power plant as it could be operated in conjunction with the Palisades plant, having regard for the limited power water rights of the United States at American Falls Dam. The study shows the proposed installation to be feasible, using rates for pumping power in keeping with those in the North Side Pumping division report to which this study is complementary.

The construction and operation of the American Falls power installation will result in the termination of a contract of October 1, 1934, with the Idaho Power Co. That contract had as its main purpose the conservation of water for irrigation use, but it was made possible at the cost of committing to the power company all surplus power of the Black Canyon power plant of the Boise project. It is desirable to continue the water-conservation features of that contract but to do so other than by continuing the commitment as to Black Canyon power. The American Falls power installation appears to be the best means of accomplishing this.

Through the adoption of the specific recommendations incorporated by reference in the Commissioner's supplemental report on Palisades and the North Side Pumping division, as approved and adopted by the Secretary, there will be authorized transmission facilities in the upper Snake River Valley for the connection of the Palisades power plant with other Federal power plants and pumping projects in that area that would include the interconnection of the Palisades plant and the American Falls installation. There also will be authorization for the building of a distribution system in the North Side Pumping division to serve the various pumping facilities of that undertaking. It is not proposed, however, that the United States continue indefinitely to operate that distribution system; accordingly, provision is made for its ultimate disposition either by sale or through some lease arrangement to some local organization.

Section 3 of the bills will give authority for the ultimate disposition of reserved space in American Falls Reservoir in keeping with the tentative agreement reached with the water users of the upper Snake River Valley. The capacity set aside for the North Side Pumping division is in accord with the report on that division. Plans for the use of the space set aside for lands in the Michaud area have yet to be fully developed. The act of June 5, 1924 (43 Stat. 390, 417), provided for an interest payment of 6 percent per annum on deferred payments of American Falls construction costs. In keeping with existing reclamation policy, it is now proposed, however, to permit deferred payments without interest. It is proposed, also, to permit a part of the returns heretofore realized by the United States from the lease of American Falls space to be applied in the reduction of the purchase price of the space.

Section 4 of the bills has two provisions of some consequence, though they are merely ancillary to the main purposes of the bill. It is proposed, first, that the Congress make continuation of the

construction of Palisades Dam beyond December 31, 1950, contingent on there being assurance satisfactory to the Secretary that the desired average annual water savings amounting to 135,000 acre-feet will be achieved. While tentative agreement has been reached with respect to all principles to govern contracts for winter water savings, it is regarded as of importance that these principles be made effective through contracts before construction of Palisades Dam proceeds very far. The imposition of such a time limit by the Congress is believed desirable for the accomplishment of this objective. The provision for extending the time limit in some circumstances is desirable.

This same section provides also that the contracts to be entered into with respect to American Falls and Palisades space may include such provisions as the Secretary finds to be proper to insure the continued effectiveness of the winter water-savings program. A part of the winter water-savings program involves providing special storage rights to water users participating in that program, but it is important that, through contract provisions, all who contract as to the use of American Falls and Palisades space be required to recognize these special storage rights. It is desirable to have legislative foundation for such a requirement, as will be provided in this section of the bills.

The State of Wyoming has an indirect interest in the proposed legislation, particularly with respect to Palisades Dam and Reservoir. There is a relationship between the storage of water in Palisades Reservoir and the priorities therefor and the use of additional water of the Snake River for lands in Wyoming. Negotiations are now going on with respect to a compact between Wyoming and Idaho and, if agreement is reached in those negotiations, the interests of Wyoming will be adequately protected. The Department, through the Federal representative, Mr. Newell, is actively engaged in seeking an equitable solution. It would be salutary, indeed, if agreement in the negotiations were to be reached before action is taken by the Congress on the proposed legislation, but it is our view that action on the legislation should be taken as early as possible without regard to the status of negotiations on the contract. There will be ample time for settlement of the issues involved in those negotiations while actual construction of Palisades Dam is in progress.

Your committee will wish, no doubt, to correct a typographical error on page 4, line 2, of the bill. The fraction there stated is "three hundred and sixty-eight four-hundred-and-thirty-fourths". It should read "three hundred and eighty-six four-hundred-and-thirty-fourths". Also, it is recommended that the expression "Secretary" be substituted for the expression "Bureau of Reclamation", in line 18, on page 2 of the bill.

Inasmuch as I understand that your committee wishes an immediate report on this bill, I am unable to advise you concerning its relation to the program of the President.

Sincerely yours,

(Signed) J. A. KRUG,
Secretary of the Interior.

AUTHORIZATION OF NORTH SIDE PUMPING DIVISION AND AMERICAN FALLS POWER PLANT

[Extract from] An act to authorize the Palisades Dam and Reservoir project, to authorize the North Side Pumping Division and related works, to provide for the disposition of reserved space in American Falls Reservoir, and for other purposes. (Act of September 30, 1950, 64 Stat. 1083, Public Law 864, 81st Cong., 2d sess.)

* * * * *

SEC. 2. There are hereby authorized for construction and operation and maintenance under the Federal reclamation laws: (a) the north side pumping division of the Minidoka project, this to be substantially in accordance with the Commissioner's report and the recommendations incorporated by reference therein, as approved and adopted by the Secretary on July 1, 1949: *Provided*, That, notwithstanding recommendations to the contrary contained in said report, (1) lease or sale of that portion of the power service system extending from the substations to the pumping plants may be made to any entity on terms and conditions that will permit the United States to continue to provide power and energy to the pumping facilities of the division, and, in the event of lease or sale to a body not entitled to preference in the purchase of power under the Federal reclamation laws, will preserve a reasonable opportunity for subsequent lease or sale to a body that is entitled to such privilege, (2) no allocation of construction costs of the division shall be made on a nonreimbursable basis by reason of wildlife benefits, and (3) there shall be, in lieu of a forty-year period, a basic repayment period of fifty years for repayment, in the manner provided in the recommendations, of the irrigation costs assigned for repayment by the water users; and (b) for the furnishing of electric power for irrigation pumping to that division and for other purposes, power generating and related facilities at American Falls Dam. These generating and related facilities, to the extent the Secretary finds to be proper for pay-out and rate-making purposes, may be accounted for together with other power facilities operated by the Secretary that are interconnected with the American Falls Dam power facilities, excluding any power facilities the net profits of which are governed by subsection I of section 4 of the Act of December 5, 1924 (43 Stat. 703). The authorizations set forth in the preceding sections 1 and 2 shall not extend to the construction of transmission lines, substations, or distribution lines unless such facilities are for the purposes of interconnecting the power plants herein authorized, or for the delivery of power and energy for use in connection with the construction, operation, and maintenance of the projects herein authorized.

SEC. 3. The Secretary is hereby authorized to contract, under the Federal reclamation laws, with water users and water users' organizations as to the use for their benefit of the heretofore reserved storage capacity in American Falls Reservoir. Not to exceed three hundred and fifteen thousand acre-feet of that

capacity shall be made available to those who have heretofore had the use of reserved capacity under lease arrangements between the United States and the American Falls Reservoir district of Idaho, the distribution of this capacity among contractors to be determined by the Secretary after consultation with the interested water users' organizations or their representatives. Of the balance of the reserved capacity, forty-seven thousand five hundred and ninety-three acre-feet are hereby set aside for use under contract for the benefit of the lands comprising unit A of the north side pumping division of the Minidoka project, and seventy-one thousand acre-feet are hereby set aside for use under contract for the benefit of those lands in the Michaud area which may hereafter be found to be feasible of development under irrigation. Contract for the repayment of construction charges in connection with reserved capacity shall be made without regard to the second proviso of the tenth paragraph (Minidoka project, Idaho) under the heading "Bureau of Reclamation" of the Act of June 5, 1924 (43 Stat. 390, 417). Such contracts shall require the repayment of all costs determined by the Secretary to be allocable to the reserved capacity, less, in the case of the three hundred and fifteen thousand acre-feet of capacity above described, three hundred and eighty-six four-hundred-and-thirty-fourths of the revenues realized, after deduction of what the Secretary determines to be an appropriate share for operation, maintenance, and replacements, from the leasing of that capacity for irrigation purposes up to the time water first becomes available in Palisades Reservoir and, in the case of the capacity set aside for the north side pumping division, all other revenues realized from or connected with the reserved capacity and which the Secretary determines to be available as a credit against the cost allocable to that division.

SEC. 4. (a) The continuation of construction of Palisades Dam beyond December 31, 1951, or such later controlling date fixed by the Secretary as herein provided, is hereby made contingent on there being a finding by the Secretary by the controlling date that contracts have been entered with various water users' organizations of the Upper Snake River Valley in Idaho that, in his opinion, will provide for an average annual savings of one hundred and thirty-five thousand acre-feet of winter water. If in the Secretary's judgment the failure of the requisite organizations so to contract by the controlling date at any time is for reasons beyond the control of those organizations, he may set a new controlling date but not beyond December 31, 1952.

(b) Repayment contracts made in connection with the use of capacity in either American Falls or Palisades Reservoir may include, among other things, such provisions as the Secretary determines to be proper to give effect to recommendations referred to in section 1 of this Act, and particularly those concerning the continued effectiveness of the arrangements as to the minimum average annual water savings.

SEC. 5. There is hereby authorized to be appropriated, out of any funds in the Treasury not otherwise appropriated, the sums of not to exceed \$76,601,000 for the Palisades Dam and Reservoir

project, Idaho, \$11,395,000 for the Minidoka project north side pumping division, Idaho, and \$6,600,000 for the American Falls power plant.

NORTH SIDE PUMPING DIVISION

BUREAU OF RECLAMATION,
Washington 25, D. C., June 17, 1949.

The SECRETARY OF THE INTERIOR.

SIR: This is my report on the proposed North Side Pumping Division of the Minidoka project, Idaho. My report is based on the accompanying report of the regional director of the Bureau of Reclamation, Boise, Idaho, on this division, dated April 12, 1949.

The proposed works would provide for the irrigation of about 77,650 acres of desert land in Minidoka and Jerome Counties, Idaho, north of the Snake River in southern Idaho. All of the area to be developed initially (77,650 acres) is public land. A portion of the project would be irrigated by pumping from the Snake River from the pool behind Milner Dam to make use of waters of the Snake River to be stored in the existing American Falls Reservoir and the proposed Palisades Reservoir. The larger portion of the division would be irrigated by drilling wells and pumping from the ground waters underlying the area. Although a large supply from this underground flow is in prospect, the ultimate acreage that can be dependably irrigated by pumping from this source can be determined only by progressive development, provision for which is included in the development plans. Power for pumping would be supplied by a new power plant to be constructed at the existing American Falls Dam, and would be transmitted to the pumps by a power transmission and distribution system which would be constructed as a part of the project, and which would also be used for transmission of power for commercial and domestic purposes.

The development of this division will fill a need for additional irrigated land in the Snake River Valley of southern Idaho to provide new homesteading opportunities for veterans. The highly productive irrigated lands of the Gravity Division of the Minidoka project which lie to the east and south of the proposed development and of the North Side Twin Falls project which lie to the west are examples of the successful irrigation developments which may be expected from these lands. Development of the new lands also would be expected from these lands. Development of the new lands also would create substantial incidental benefits to wildlife that would be secured through the carrying out of the

measures recommended by the Fish and Wildlife Service, including the establishment and fencing of wildlife management areas on lands not suitable for agricultural use.

The development of the North Side Pumping Division of the Minidoka project has been under consideration since 1904. Storage space in Jackson Lake Reservoir, completed in 1911, was originally allotted to lands of this division. When these lands remained undeveloped, this space was sold for use on other areas, it being expected that storage needed for new divisions of the Minidoka project could be provided out of American Falls space. The present plan involves a use of but a portion of the American Falls reserved space for this division. It is regarded as equitable, nevertheless, to provide that all revenue in excess of cost from the disposal of the Jackson Lake space and a part of the revenue that has been realized from the lease of American Falls space should be made available as a credit against the cost of the North Side Pumping Division that must be repaid by the settlers.

The regional director has estimated the total cost of the North Side Pumping Division at \$11,395,000, with estimated annual costs for operation and maintenance, including cost of power for pumping, and replacement of \$572,950. Taking account of the amount that may be available for credit, as above indicated, the remainder of the construction cost, about \$10,892,000, will need to be accounted for. The regional director has proposed an allocation of \$995,900 to the preservation and propagation of fish and wildlife. The remaining amount, \$9,901,100, is reimbursable. Of this amount \$7,142,100 would be allocated to irrigation and \$2,759,000, the cost of the power service system, would be allocated to power with the greater portion of the latter apportioned to irrigation pumping. The water users would repay fully the irrigation allocation in 40 annual installments except for a possible extension that might result from application of a variable repayment plan. The costs allocated to power would be expected to be repaid out of power revenues during a 56-year period, assuming an 11-year period for the well development program and a 5-year agricultural development period.

I concur in and adopt the recommendations of the regional director as to the authorization for the construction, operation, and maintenance of the proposed works, and, in particular, the recommendations set out in paragraph 37 thereof.

I recommend that you approve and adopt this report as your proposed report on the North Side Pumping Division of the Minidoka project, Idaho, and that you authorize me in your behalf to transmit it to the Secretary of the Army and to the States of the Columbia River Basin in accordance with the provisions of section 1 of the Flood Control Act of 1944 (58 Stat. 887).

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved and adopted, July 1, 1949.

(Signed) J. A. KRUG,
Secretary of the Interior.

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington, D. C., January 19, 1950.

THE SECRETARY OF THE INTERIOR.

Sir: On July 1, 1949, Secretary Krug approved and adopted the proposed report of the Bureau of Reclamation on the North Side Pumping Division of the Minidoka project, Idaho, authorizing me, in his behalf, to send copies of the report to the Secretary of the Army and to the appropriate officials of the States of the Columbia River Basin for their views and recommendations in accordance with the provisions of section 1 of the Flood Control Act of 1944.

Accordingly, copies of the report were sent to the Secretary of the Army, to officials of the States of Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming, and also to the Secretary of Agriculture, the Chairman of the Federal Power Commission, and the Director of the Office of Domestic Commerce of the Department of Commerce. Copies of all of the comments received are attached.

I have given careful consideration to the comments received. The comments of the States of Idaho, Montana, Nevada, and Utah were favorable. The comments of the State of Wyoming raised no objection to the report, provided that construction of the project be not undertaken until after the Idaho Legislature shall have ratified a Snake River Compact in accordance with the resolution of the Snake River Compact Commission, dated July 29, 1949. Ratification of such a compact and its approval by the Congress by early 1951 appears probable, as agreement has been reached by the compact commissioners on a draft of the compact.

The Secretary of the Army requested assurance that the operation of the upper Snake River reservoirs be in accordance with agreements that have been worked out in consultation with the Corps of Engineers. This assurance has been given by Assistant Secretary Warne's letter of November 30, 1949.

Officials of the Departments of Agriculture and Commerce raised several questions of essentially technical nature, concerning the economic analysis presented in the report. These questions are discussed fully and answered in your letter to the Secretary of Agriculture and my letter to the Director, Office of Domestic Commerce, Department of Commerce, copies of which are attached.

In my opinion, the comments received and the questions raised in no way affect the basic conclusions and recommendations of your proposed report. Accordingly, I recommend that you adopt the report which was approved on July 1, 1949, as your final report, and that you transmit it, together with copies of the at-

tached comments and responses thereto, to the President and to the Congress for appropriate action. Bills, intended to authorize this project and certain related reclamation works (H. R. 5506 and the companion Senate bills, S. 2195 and S. 2203), are now pending in both the House and Senate and with favorable committee reports thereon. Departmental reports on these bills were made, in response to committee requests, on August 10, 1949, and copies of the reports were forwarded to the Director of the Bureau of the Budget with request for advice. Your letter to the President, through the Bureau of the Budget, it is hoped will clear the way for the requisite legislative action.

Respectfully yours,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved and adopted, March 4, 1950.

(Signed) OSCAR L. CHAPMAN,
Secretary of the Interior.

MIRAGE FLATS PROJECT

NEBRASKA

Construction of the Mirage Flats project was recommended by the Secretary on March 30, 1940, and approved by President on April 26, 1940, under the terms of the act of May 10, 1939 (53 Stat. 685, 719). Completion of construction of the project under the terms of the Water Conservation and Utilization Act of August 11, 1939, as amended, was recommended by the Secretary on June 15, 1944, and approved by the President on July 13, 1944.

THE SECRETARY OF THE INTERIOR,
Washington, March 30, 1940.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: The Interior Department Appropriation Act, 1940, contains an item of \$5,000,000 from which allocations may be made by you:

For construction, in addition to labor and materials to be supplied by the Works Progress Administration, of water conservation and utilization projects, * * * in the Great Plains and arid and semi-arid areas of the United States, * * *

All expenditures from the appropriation, and as much of the expenditures from the Work Projects Administration fund as the President determines, are to be considered reimbursable. Hereinafter the appropriation item will be termed the "1940 Water Conservation Appropriation."

The Mirage Flats irrigation project in Dawes and Sheridan Counties, northwestern Nebraska, near the town of Hay Springs, is the type of project that is contemplated to be constructed under the provisions of this item. The project is one of those recommended for construction by the Northern Great Plains Committee in its 1938 report to you, and I concur in this recommendation.

The lands to be irrigated, comprising 12,000 acres, are situated

on the north bank of the Niobrara River, about eleven miles south of Hay Springs. The soil is a fertile silty to sandy loam and is capable of furnishing good yields of hay, grain, potatoes, and similar crops. State highways cross the project, and U. S. Highway No. 20 and the main line of the Chicago and Northwestern Railroad pass through Hay Springs, thus providing access to markets.

The area has been dry-farmed for half a century, but crop losses have been heavy in the dry years. Irrigation works were partially built by the farmers at one time but failed due to poor construction and lack of storage facilities. A majority of the land holdings is in tracts of 160 acres or less and should not be reduced in area. There are some larger tracts that should be subdivided and this arrangement should be obtained either through a contract with an irrigation district providing for the sale of excess holdings or the large holdings should be purchased and resold in smaller blocks. A plan of development now being contemplated is to furnish irrigation water for approximately one-half of each holding. This would foster the most efficient use of the limited water supply, result in a combination of irrigated and dry farming well adapted to the locality, and would maintain the fertility of twice the area of a solidly irrigated block.

The plan of irrigation is to construct a diversion dam on the Niobrara River at the upper end of the project, a main canal approximately fifteen miles long, and a system of laterals, sublaterals, and farm ditches. An earth and rock fill dam would be built on the river about nine miles above the diversion dam to provide approximately 30,000 acre feet of water storage. Construction would also include the necessary rough land leveling.

The estimated cost of construction, including the building of all irrigation structures, rough land leveling, and resettlement costs, is \$2,560,000. The experience of the Bureau of Reclamation on projects which are similarly situated indicates that water users will be able to repay \$985,000 of this amount over a period of forty years and, in addition, to carry the annual costs for operation and maintenance. This latter sum should be obtained from the 1940 Water Conservation Appropriation. The remaining amount of \$1,575,000 required to construct the project is expected to be provided by the Work Projects Administration. A tabulation is attached in which is shown a tentative breakdown of expenditures from the two funds. The estimate of expenditures from Work Projects Administration funds is based on the experience of the Bureau of Reclamation on construction with relief forces under the legislative provisions in effect prior to fiscal year 1940. The efficiency with which the work can be constructed under the new regulations is unknown. Therefore, the estimate of Work Projects Administration funds required may need revision at some later date.

I recommend that the Bureau of Reclamation undertake the construction of the Mirage Flats project; that appropriate bureaus of the Department of Agriculture conduct the land development program and the arrangements for settlement, repayment,

and project operations; and that the National Resources Planning Board assist in the planning and coordinated field.

I recommend that an allocation of \$985,000 from the 1940 Water Conservation appropriation be made to the Department of the Interior, Bureau of Reclamation and that the Work Projects Administration be requested to give earnest consideration to the project applications which will be filed by the Bureau of Reclamation to obtain the remaining \$1,575,000 needed for the construction of the Mirage Flats project.

The Bureau of Reclamation will reimburse the Department of Agriculture and the National Resources Planning Board for all services provided by those two agencies in connection with the construction of the project through transfers or advances from the funds made available to the Bureau of Reclamation. Letters containing the comments of the Department of Agriculture and the Work Projects Administration are enclosed.

It is contemplated that actual construction will not be undertaken until the Department of Agriculture has made sufficient progress in an effort to obtain control of the large holdings, at prices which do not exceed appraised valuations, to insure the successful operation of the project. The time required for the construction of the project will depend largely on the availability of relief labor and may extend to three or four years.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved April 26, 1940.

(Signed) FRANKLIN D. ROOSEVELT,
President.

THE SECRETARY OF THE INTERIOR,
Washington 25, D. C., June 15, 1944.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: There is presented herein, for your approval, a proposal to complete and to bring into operation the Mirage Flats irrigation project in Dawes and Sheridan Counties, Nebraska, under the provisions of the Act of July 16, 1943 (Public 152—78th Congress), which amended the Water Conservation and Utilization Project Acts of August 11, 1939 (53 Stat. 1418) and October 14, 1940 (54 Stat. 1119). The construction of this project, which involves the development of a new water supply for 12,000 acres of land, was approved by you on April 26, 1940, under the provisions of the Interior Department Appro-

priation Act of 1940. Copies of the original approval papers are attached.

STATUS OF CONSTRUCTION

The major construction feature of the project is a rolled earth-fill dam, which is now about 60 percent complete. Most of the concrete had been placed in the outlet works structure and spillway, and the embankment of the main dam section had been placed to within eight feet of crest elevation in some sections, when the War Production Board ordered the work halted on December 12, 1942. Practically all of the construction equipment was left at the site and is available to complete the work. Much of the critical construction material is on hand. Future construction would require the purchase of about 488 tons of steel, wire rope, nails, repair parts for construction equipment, and similar items which, it is estimated, would cost approximately \$46,000. A considerable amount of non-critical construction materials would have to be purchased. The Facilities Committee of the War Production Board approved the project for construction on January 29, 1944, and assigned it an AA-3 priority rating. The Bureau of Reclamation began work as soon thereafter as weather conditions permitted and is now carrying on construction of the dam with Government forces.

ESTIMATED COST AND FINANCING PROCEDURE

When you approved this project for construction on April 26, 1940, it was estimated that the total cost of construction by the Bureau of Reclamation would be about \$2,200,000, of which the Work Projects Administration would furnish \$1,385,000 in the form of labor and some materials. The balance of the cost, \$815,000, was expected to be repaid by the prospective irrigators, this amount being regarded as within their ability to repay over the statutory repayment period. Advancing costs during the period following your approval, delays in shipping and transportation which retarded delivery and added to the overhead costs, the loss of trained personnel, the liquidation of the Work Projects Administration and the Civilian Conservation Corps, and finally, the complete halting of a well-functioning construction organization were all factors which contributed toward making it impossible to complete the project within the original estimated costs. It is now estimated that the total cost of the project when completed would approach \$3,100,000.

Of the total cost, \$815,000 have been allotted from the appropriation for Water Conservation and Utility Projects. The Work Projects Administration furnished labor and materials to the value of \$346,119 out of its originally estimated contribution of \$1,385,000, and the Civilian Conservation Corps spent \$8,247 before being removed from the project by the Army. If circumstances require, it is proposed to complete the project by supplementing the present free labor with labor to be supplied from

the local prisoner of war camp either directly to the Bureau or to contractors. It is believed that the proposed construction could be completed if \$1,906,000 were made available for the work. The financial arrangements proposed for the completion of the Mirage Flats project are as follows:

Total estimated cost.....		\$3,100,000
Expenditures from General Fund.....	\$670,000	
Unencumbered balance of General Fund.....	145,000	
Contributed by Work Projects Administration.....	346,119	
Contributed by Civilian Conservation Corps.....	8,247	
Value of stores in stock.....	25,000	
Transfer value of equipment upon completion of work.....	25,000	
Total	1,219,366	
	Call it	1,219,000
Estimated balance required in lieu of anticipated contributions		1,881,000
Overallotment for transfer value of equipment which will be credited upon completion of work.....		25,000
Estimate of funds required.....		1,906,000

Note:—The above figures are estimates and not limitations. If you approve the continuation of construction, it is proposed to allot \$1,906,000 to this project from the appropriation for Water Conservation and Utility Projects. This sum represents advances in costs brought about by the war, and the difference between funds anticipated but not received from the Work Projects Administration and Civilian Conservation Corps. Construction would proceed in accordance with Section 5 of the Act of July 16, 1943 (Public 152—78th Congress). Sufficient funds to carry out the functions of the Department of the Interior have been appropriated and are now available for allotment.

CONSULTATION WITH THE WAR FOOD ADMINISTRATOR

On March 2, 1943, I transmitted to the Secretary of Agriculture, for his consideration, an optimum five-year program covering the production of certain critical war foods in which the bureaus of the Department of the Interior had special administrative responsibilities. The Mirage Flats project was among the irrigation projects recommended for consideration and on May 15, 1943, detailed information was submitted to the War Food Administrator. On July 12, the War Food Administrator recommended this project to the War Production Board. However, the Board disapproved the project on August 12, 1943. After further investigation the War Food Administrator presented additional facts to the War Production Board on December 12, and the Board approved the project for construction on January 29, 1944.

FINDINGS AND RECOMMENDATIONS

Total reimbursable costs were fixed at \$985,000 in the finding

of April 26, 1940, made pursuant to the War Conservation and Utility Projects item contained in the 1940 Interior Department Appropriation Act. Of this total, \$170,000 represented repayment for the settlement and development work of the Department of Agriculture, and \$815,000 represented repayment for construction to be accomplished by the Bureau of Reclamation. Within the limits of the authority of the Act of July 16, 1943, I shall make adjustments in the project construction costs to the extent necessary to keep the reimbursable costs in conformity with that finding.

I have consulted with the War Food Administrator, acting in the stead of the Secretary of Agriculture, concerning the justification of this project. Based on these consultations and on the information available to me concerning the project, I find that the proposed construction is justifiable as an aid in the production of needed agricultural products. A letter addressed to you from the War Food Administrator is enclosed in which is indicated the proposed participation of the Department of Agriculture.

I recommend that you approve this report and finding, and that you reiterate the recommendations that you approved on April 26, 1940. Since this project was originally approved under the terms of the \$5,000,000 item in the 1940 Interior Department Appropriation Act, it is contemplated that the project will be transferred to the Department of Agriculture upon the completion of the construction by the Bureau of Reclamation, and that the Department of Agriculture will carry on land development, settlement, and all of the other necessary project operations, including the collection of repayment charges for construction as well as land development and settlement activities.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE.
JULY 13, 1944

Approved with understanding that decision as to transfer of works constructed by Bureau of Reclamation shall be postponed:

(Signed) FRANKLIN D. ROOSEVELT,
President.

MISSOULA VALLEY PROJECT

MONTANA

The Missoula Valley project was found feasible by the Secretary on October 20, 1943, and approved by the President on May 10, 1944, under the terms of the Water Conservation and Utilization Act of August 11, 1939, as amended. The Big Flat unit was constructed under this authorization, but the North Side unit (also called North Side Low Lift unit) has not been constructed.

OFFICE OF THE SECRETARY,
Washington, October 20, 1943.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: An investigation has been made of the Missoula Valley project involving the irrigation of approximately 2,100 acres of land in Missoula County, Montana, and pursuant to the authority of the Act of August 11, 1939, (53 Stat. 1418), as amended, (herein called the Act) I submit this report on the proposed project and request your approval of the findings, recommendations, and certifications contained herein.

PROJECT PURPOSE

The primary purpose of the proposed project would be to develop a water supply for 900 acres of new land, and a supplemental supply for 1,200 acres which are now inadequately irrigated. The former area, known as the Big Flat Unit, is situated on the west side of the Clark Fork River about 7 miles west of the City of Missoula, Montana, while the other tract, known as the North Side Low Lift Unit, lies northwest of the City of Missoula, and north of the existing Flynn Ditch, which draws its supply from the Clark Fork River. The immediate development of this project would provide a means of increasing the production of agricultural products now vitally needed. After the war

it is believed that the project would contribute toward the solution of problems arising out of interstate movements of agricultural populations by providing new homes and opportunities for a few additional farm families.

THE PLAN

Big Flat Unit.—A simple headgate structure on the Bitter Root River would direct the river water into a gravity canal through which the water would be carried for a distance of about 6 miles to the project area. A concrete pipe conduit near the end of the canal would be constructed on a short stretch of steep rocky hillside. Drainage facilities would be constructed if required. Other structures which would be required for the development would consist of a siphon, and the usual turnouts, wasteways, small bridges, and similar features.

North Side Low Lift Unit.—A supplemental supply would be furnished to this unit by enlarging and reconditioning existing channels leading from the Clark Fork River. Water would be pumped up and over an escarpment into a canal which would be constructed to connect with the existing distribution system. Some drainage is also contemplated. Structures required for this unit would consist of a small pumping plant, and the usual turnouts, wasteways, small bridges, and similar features.

The availability of sufficient electric power is assured, and construction of the entire project would be undertaken as soon as practicable. In the event that pumping equipment cannot be obtained, the Big Flat Unit would be constructed first and work on the other unit would be undertaken as soon as conditions permit.

An adequate water supply is believed to be available for all the lands which would be benefited. An existing power development may be affected somewhat during periods of extremely low summer flow, but adverse results would be offset by increased winter discharge as a result of accretions from irrigation return flow. The affected company has informally stated that it is willing to enter into an agreement which will permit the project to go forward.

Changes in these general plans may be found necessary, but it is expected that any changes will be of a minor nature and will neither alter the general objectives of the project nor result in material departures from the present findings, predicated on the present plans for the project.

PARTICIPATION OF FEDERAL AGENCIES

The Bureau of Reclamation would construct the pumping plant, the headgate structures, siphon, canal and drainage systems, and other necessary and appurtenant structures, and, subject to change, also would operate the system after it is built. The Bureau would negotiate contracts with the water users for the repayment of the reimbursable construction charges.

The War Food Administrator, acting in the stead of the Secretary of Agriculture, has transmitted a letter which is enclosed, indicating his approval of the project and the extent of the proposed participation by the Department of Agriculture. From this letter it will be noted that the War Food Administrator concurs in my belief that the construction would be justifiable as an aid in the production of needed agricultural products.

Services, labor, materials, supplies, equipment, and similar items which may become available through the Selective Service System, Prisoner of War Camps, or other Federal agencies may be utilized under the terms and conditions fixed by such agencies, if, in my opinion, such use would effectively expedite construction of the project.

PARTICIPATION OF NON-FEDERAL AGENCIES

Local interests requesting the development of the project indicate that they would form suitable organizations in order to contract with the Government for the repayment of that part of the construction cost which has been determined to be reimbursable. The water users benefited by the work of the Department of Agriculture would be required to repay the reimbursable money expended in that work in accordance with the Act. Aid which may be offered by the local interests probably would be accepted.

ESTIMATED COST AND FINANCING PROCEDURE

The total cost to this Department would be \$250,000. The Department of Agriculture would undertake activities pursuant to Section 5 of the Act which are estimated to cost \$237,000. The activities of both Departments would be financed with monies heretofore appropriated for Water Conservation and Utilization Projects. The total expenditure is estimated to be \$487,000.

It is estimated that the water users can repay \$103,000 of the works to be built by the Bureau of Reclamation. All net project costs in excess of this amount would, as authorized by the Act, be excluded from the project construction cost and be treated as nonreimbursable.

It is estimated that the water users can repay \$198,000 of the costs of the work to be performed by the Department of Agriculture. All costs in excess of this amount would, as authorized by the Act, be treated as nonreimbursable.

In addition to the above estimated costs, over allotments should be provided for the Department of the Interior and the Department of Agriculture in the sum of \$52,000 and \$15,000 respectively. These sums represent the estimated transfer value of equipment which would be returned to the project upon completion of construction.

Sufficient funds for these purposes have been appropriated and are now available for allotment.

SIZE OF FARM UNITS

Since the exact size may vary over the project area in accordance with the varying conditions of the project lands, limitations on the various holdings will be established after more complete and final surveys have been made. It now appears that ultimately the proper size holding would be about 160 acres of irrigable land. In this connection, considering the problems attendant on farm operation during the war and the need for the greatest possible production of agricultural products with the available farm labor supply, I expect to determine that for the duration of the war the limitations on the delivery of water will not be applicable to existing land holdings which exceed in area the maximum to be established for any farm unit.

FINDINGS, CERTIFICATIONS, RECOMMENDATIONS

Based upon the report covering the engineering and economic aspects of the work proposed to be accomplished by the Bureau of Reclamation, I find and certify that:

1. The proposed project has engineering feasibility.
2. The total estimated cost is \$250,000.
3. The estimated cost which properly could be allocated to irrigation is \$250,000.
4. The water users probably could repay \$103,000 in accordance with the requirements of Section 4 of the Act.
5. No part of the estimated costs properly could be allocated to municipal or miscellaneous water supply or power.
6. No part of the estimated cost properly could be allocated to the irrigation of Indian trust and tribal lands.
7. No part of the estimated costs properly could be allocated to flood control.
8. The proposed construction is justifiable as an aid in the production of needed agricultural products.

If you approve the project, it is planned to proceed immediately with matters relating to land acquisition, water rights, and repayment contracts so that the requirements of the statutes may be met as promptly as possible. The project has heretofore been submitted to the War Production Board for clearance for commencement of construction and procurement of materials needed for construction.

On the basis of the foregoing report and findings, I recommend that you approve this project for construction.

Sincerely yours,

(Signed) ABE FORTAS,
Acting Secretary of the Interior.

THE WHITE HOUSE.

Approved May 10, 1944.

(Signed) FRANKLIN D. ROOSEVELT,
President.

MISSOURI RIVER BASIN PROJECT

The initial stages of the Missouri River Basin project were authorized for construction on December 22, 1944, by the Flood Control Act of 1944, and the comprehensive plan of the project was approved on July 24, 1946, by the Flood Control Act of 1946. The project is being constructed in cooperation with the Corps of Engineers. (See also Fort Peck project, page 430.)

BUREAU OF RECLAMATION,
Denver, Colorado, April 14, 1944.

From: Board of Review
To: Commissioner
Subject: Report on Conservation, Control, and Use of Water Resources of the Missouri River Basin.

BOARD OF REVIEW'S REPORT TO THE COMMISSIONER

1. Pursuant to instructions in your letter of February 2, 1944, the undersigned convened as a special board of review in Denver, Colorado, April 10 to 13, 1944, to consider the report of April 1944 on the Conservation, Control, and Use of Water Resources of the Missouri River Basin, prepared by the Bureau of Reclamation staff of region 6, assisted by consultants, and representatives of other Government agencies. The results of our review of the reports are respectfully submitted herein.

* * * * *

INITIAL CONSTRUCTION PROGRAM

23. * * *

RECOMMENDATIONS

It is recommended:

(a) That the general plan for the development of the basin as contained in the report be approved subject to such modifications and changes as may be indicated, from time to time, as the plan is effectuated.

(b) That all works that may be authorized under the approved plan be constructed, operated, and maintained by the Bureau of Reclamation under the direction of the Secretary of the Interior wherever the dominant function of such works is other than navigation and flood control.

(c) That the Bureau of Reclamation under the direction of the Secretary of the Interior make all arrangements for the sale and distribution of electric energy generated at all hydroelectric developments hereafter constructed by any Federal agency within the basin as defined in the report, and be authorized to construct, operate, maintain, and improve such electric transmission lines and substations as it finds necessary or desirable in connection therewith.

(d) That the initial construction program as hereinabove presented be adopted and that an appropriation of \$200,000,000 be authorized for the prosecution of construction work on the first stage of the program and for the continuation of investigations on the general plan of development.

(Signed) E. B. DEBLER,

*Chairman, Director of Branch
of Project Planning.*

S. O. HARPER,

*Chief Engineer, Director of Branch
of Design and Construction.*

H. F. MCPHAIL,

*Director of Branch
of Power Utilization.*

W. F. KUBACH,

*Director of Branch of Fiscal
and Administrative Management.*

D. S. STUVER,

*Assistant Director of Branch
of Operation and Maintenance.*

BUREAU OF RECLAMATION,
Washington, April 28, 1944

THE SECRETARY OF THE INTERIOR.

SIR: In accordance with section 9 of the act of August 4, 1939 (53 Stat. 1187, 43 U. S. C. 485), I transmit this report on Conservation, Control, and Use of the Water Resources of the Missouri River Basin.

I recommend it to you for your approval and for submission to the Congress, after submission to the Bureau of the Budget in accordance with section 4 of Executive Order 9384, and to the President in conformity with the 1939 act.

The reclamation plan proposes a total of 90 reservoirs with a combined capacity of 45,700,000 acre feet, most of the reservoirs

on tributaries of the Missouri for use in irrigation, flood control, and power development, but two-thirds of the reservoir capacity on the main stream for use in flood control, aid to navigation, power development, and irrigation.

When fully developed, the plan would provide water for the irrigation of 4,760,400 acres of dry land, and supplemental water for 538,000 acres of land now irrigated but not assured adequate water in years of low run-off. Seventeen power plants, in the completed power system, would supply seasonal power for pumping water for irrigation, and nearly four billion kilowatt-hours of firm power, annually, for domestic, commercial, and industrial uses.

The irrigation of numerous areas scattered widely over the Northern Great Plains and over other semi-arid sections of the Missouri River Basin would add to an unavoidably precarious dry-farm and grazing economy the stabilizing influence of lands with insured crops and high yields.

The droughts of the last decade cost governmental agencies, principally Federal, a total of \$1,246,557,087, and these expenditures were inadequate to the needs, since tens of thousands of families nevertheless were forced to migrate from their abandoned homes. These expenditures are roughly equal to the cost of full utilization of the waters of the Missouri River system. While it is not contended that full use of these waters will eliminate drought losses, it will reduce the catastrophic effects and prevent much of the human suffering.

I have submitted the report to the agencies of the Department of the Interior which have interests in the waters of the Missouri River Basin and have their approval or their comment, which is attached. I have submitted the report to the Interagency River Basin Committee, in accordance with the quadripartite agreement of December 29, 1943. I have the comment of the Corps of Engineers, which is also attached.

The Assistant Commissioner of the Office of Indian Affairs, on April 26, 1944, said with regard to the recommendations made in the report dated April 14, 1944, of the Board of Review, that the Office of Indian Affairs should construct, operate and maintain irrigation features including dams that predominantly serve Indian lands. I concur in the opinion, and I am sure that the members of the Board of Review will regret their oversight in this connection. The report should recognize the authority and responsibility of the Office of Indian Affairs in the matter of irrigating Indian lands.

The Chief of Engineers, War Department, in his letter of April 25, 1944, observed that the Reclamation plan included tributary reservoirs that would fit the plan presented by the Corps of Engineers in House Document 475, Seventy-eighth Congress, second session, and commented that modifications made in the proposals for the Yellowstone, Big Horn, Kansas, Smoky Hill, and Republican River Basins could be coordinated in advance of construction by further cooperation by the Corps of Engineers and the Bureau of Reclamation. With regard to the main stem of the Missouri River, however, the Chief of Engineers noted that the

reclamation plan contemplated 10,250,000 acre-feet less storage than had been proposed by the Corps, and concluded that a high dam at the Garrison site, which was not included in the reclamation plan, is necessary. The main stem dams, the Chief of Engineers said, should be built, operated, and maintained by the Corps, and the tributary dams should be built, operated, and maintained by the agency with the dominant interest. Flood control storage should be utilized in accordance with regulations prescribed by the Secretary of War, and irrigation storage in accordance with regulations of the Secretary of the Interior, he proposed. The Chief of Engineers noted that irrigation of the Souris area, as proposed in the Reclamation plan, would require diversion of waters from the Missouri River, and he advised further study of this undertaking pending fulfillment of existing and foreseeable needs within the Basin. He questioned the computations in the reclamation report of benefits and allocations.

I agree with the Chief of Engineers that details can be worked out satisfactorily through cooperation as the projects are constructed on the tributary streams. I agree that the agency with the dominant interest should construct the dams and other works in the Basin, and I agree that the main stem storage dams should be constructed by the Corps, owing to their close relationship with flood control and navigation. The Reclamation plan provides a storage capacity in main stem reservoirs of 24,950,000 acre-feet, which is 10,250,000 acre-feet less than that proposed by the Corps, but when considered together with more than 10,000,000 acre-feet of storage provided upstream, this amount is believed to be sufficient to provide full flood protection and ample storage for regulation for navigation. However, if continuing studies by the Corps and the Bureau of Reclamation should indicate the need of additional storage in the main stem after the high dam at Oahe is built, then there is and should be ample opportunity to provide the additional storage needed. The Oahe Dam, as proposed, would provide a reservoir of a capacity of 19,600,000 acre-feet as against the Garrison Dam proposed by the Corps which would provide a reservoir of only 17,000,000 acre-feet. In any event, one of these would constitute the initial flood-control facility. It would appear that the Oahe Dam would be more desirable from the flood-control standpoint, as it is also from the irrigation point of view.

The regional report of April 1944 is covered by the report of April 14 of the Board of Review. I approve the findings, the comment, and the recommendations made in the report of the Board of Review.

I find that the proposed development of the Missouri River Basin is needed, as conclusively shown in the report. The plan has engineering feasibility. The ultimate cost is estimated at \$1,257,645,700, and the annual benefits of the completed development would be 2.57 times the annual costs. The annual benefits would be as follows:

Irrigation	\$130,000,000	Navigation	\$4,165,000
Power	17,141,000	Municipal water	500,000
Flood control	16,500,000		

Irrigation would be expected to repay in 40 annual payments \$298,000,000. Power revenues in 50 years would repay \$423,100,000, and municipal water users would repay \$20,000,000.

The initial construction proposed would require \$200,000,000 and would be dominantly for irrigation and power. It includes none of the features that would be constructed by the Corps of Engineers in the development of the basin, but it would complement the flood-control construction proposed by the Corps.

I recommend that the construction, repayment, operation, and maintenance of the works proposed be in accordance with this report. I recommend the approval and authorization of the initial stage for construction after the war substantially in accordance with this report, but with such modifications by the Secretary of the Interior and the Commissioner of Reclamation as may be required to meet developing needs.

Respectfully,

(Signed) H. W. BASHORE,
Commissioner.

OFFICE OF THE SECRETARY,
Washington, May 1, 1944.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: There is transmitted herewith my report on the Missouri River Basin, which is the letter of April 28, 1944, of the Commissioner of Reclamation and its attachments, which I approve.

The report contemplates utilization of the waters of the Missouri River beneficially for multiple purposes in the stabilization of the agriculture and economy of this vast basin which includes the Northern Great Plains, where drought periodically deals devastation. The maximum degree of stabilization can be obtained only through full utilization of the waters of this river system.

The construction proposed in this report would be complementary, for the most part, to that recently suggested by the Secretary of War for flood control on the Missouri River. The two plans, while not identical, apparently can be successfully coordinated.

The initial stage proposed in this report would involve expenditures estimated at \$200,000,000. The economic and human gains that can be expected will amply justify this step. The plan has engineering feasibility. Water users, rural and urban, would be expected to repay, in accordance with their ability and the benefits extended to them, parts of the costs, and I find that they

probably can meet the charges indicated. Power users would be expected to repay additional parts of the costs. It reasonably can be expected that these returns to the United States Treasury will be effected. Flood control and navigation allocations would be nonreimbursable. Substantial and material benefits would accrue through recreational use of the waters and facilities proposed; through their use in fish and wildlife conservation; through pollution abatement, silt control, and the recharge of lakes and ground waters. These are not assessable in monetary terms, and no repayments are contemplated from them.

I find desirable and feasible the development of the Missouri River Basin in accordance with this report on the Conservation, Control, and Use of the Water Resources of the Missouri River Basin, and I recommend authorization for construction after the war of the initial stage in accordance with the report and as contemplated in Section 9 of the Reclamation Project Act of 1939.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, May 4, 1944.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: I have your letter of May 1 transmitting a copy of the report entitled "Conservation, Control, and Use of Water Resources of the Missouri River Basin."

I am not now able to advise you, because of the need for further consideration of certain recommendations of the proposed report, as to the relation to the program of the President of the various recommendations therein.

Since I am advised, however, that the congressional committees having jurisdiction of pending legislation, to which these recommendations relate, are contemplating early consideration of such legislation, I am writing to say that this office would, of course, have no objection to your making the report immediately available for the consideration of these committees. In doing so, the committee should be informed, I think, that you have not received from this office advice as to the relation of the report recommendations to the program of the President.

Very truly yours,

(Signed) HAROLD D. SMITH,
Director.

The above cited and preceding documents are included in Senate Document No. 191, 78th Cong., 2d sess.

FLOOD CONTROL ACT OF 1944

[Extract from] An act authorizing the construction of certain public works on rivers and harbors for flood control, and for other purposes. (Act of December 22, 1944, 58 Stat. 887, 891, Public Law 534, 78th Cong., 2d sess.)

* * * SEC. 9. (a) The general comprehensive plans set forth in House Document 475 and Senate Document 191, Seventy-eighth Congress, second session, as revised and coordinated by Senate Document 247, Seventy-eighth Congress, second session, are hereby approved and the initial stages recommended are hereby authorized and shall be prosecuted by the War Department and the Department of the Interior as speedily as may be consistent with budgetary requirements.

(b) The general comprehensive plan for flood control and other purposes in the Missouri River Basin approved by the Act of June 28, 1938, as modified by subsequent Acts, is hereby expanded to include the works referred to in paragraph (a) to be undertaken by the War Department; and said expended plan shall be prosecuted under the direction of the Secretary of War and supervision of the Chief of Engineers.

(c) Subject to the basin-wide findings and recommendations regarding the benefits, the allocations of costs and the repayments by water users, made in said House and Senate documents, the reclamation and power developments to be undertaken by the Secretary of the Interior under said plans shall be governed by the Federal Reclamation Laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto), except that irrigation of Indian trust and tribal lands, and repayment therefor, shall be in accordance with the laws relating to Indian lands.

(d) In addition to previous authorizations there is hereby authorized to be appropriated the sum of \$200,000,000 for the partial accomplishment of the works to be undertaken under said expanded plans by the Corps of Engineers.

(e) The sum of \$200,000,000 is hereby authorized to be appropriated for the partial accomplishment of the works to be undertaken under said plans by the Secretary of the Interior.

FLOOD CONTROL ACT OF 1946

[Extract from] An act authorizing the construction of certain public works on rivers and harbors for flood control, and for other purposes. (Act of July 24, 1946, 60 Stat. 641, 653, Public Law 526, 79th Cong., 2d sess.)

MISSOURI RIVER BASIN

* * * SEC. 18. In addition to previous authorizations, there is

hereby authorized to be appropriated the sum of \$150,000,000 for the prosecution of the comprehensive plan adopted by section 9a of the Act approved December 22, 1944 (Public, Numbered 534, Seventy-eighth Congress), for continuing the works in the Missouri River Basin to be undertaken under said plans by the Secretary of the Interior.

FLOOD CONTROL ACT OF 1950

[Extract from] An act authorizing the construction, repair, and preservation of certain public works on rivers and harbors for navigation, flood control, and for other purposes. (Act of May 17, 1950, 64 Stat. 163, 184, Public Law 516, 81st Cong., 2d sess.)

* * * SEC. 215. * * * In addition to previous authorizations, there is hereby authorized to be appropriated the sum of \$200,000,000 for the prosecution of the comprehensive plan adopted by section 9a of the Act approved December 22, 1944 (Public, Numbered 534, Seventy-eighth Congress), for continuing the works in the Missouri River Basin to be undertaken under said plans by the Secretary of the Interior. * * *

ANGOSTURA UNIT

The Angostura project was found feasible by the Secretary on February 19, 1941, under the provisions of the Water Conservation and Utilization Act of August 11, 1939, as amended and approved by the President on March 6, 1941. It was reauthorized as a unit of the Missouri River Basin project which was authorized by the Flood Control Acts of 1944 and 1946. Construction has been undertaken under the latter authorization.

OFFICE OF THE SECRETARY,
Washington, February 19, 1941.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: An investigation has been made of the Angostura irrigation project in Custer and Fall River counties, South Dakota; and pursuant to the authority of the act of August 11, 1939 (53 Stat. 1418), as amended by the act approved October 14, 1940 (Public Law 848, 76th Cong., 3d sess.),

I submit this report on the proposed project, and request your approval of the findings and certifications contained herein.

PROJECT PURPOSE AND PLAN

The purpose of the project is to furnish a supply of irrigation water to lands which are now farmed unsuccessfully, if at all, under dry farming practices. The principal features as now proposed, subject to such changes as final surveys may indicate, are a storage reservoir on the Cheyenne River, about 6 miles southeast of the city of Hot Springs, South Dakota; a distribution system of canals and laterals leading from the reservoir to the project lands; and a drainage system which will be built when the seepage conditions make it necessary. The estimated height of the dam, which will create the reservoir, is 132 feet above foundation, and its crest length approximately 600 feet, exclusive of spillway and dike. An unusually large spillway capacity is needed to bypass flood flows around the dam, and it is planned to provide this by a permanent spillway equipped with two radial gates and an emergency spillway consisting of an uncontrolled concrete crest 1030 feet in length. The estimated capacity of the reservoir is 120,000 acre-feet, of which 40,000 acre-feet will be available for irrigation use. The remaining 80,000 acre-feet will be used largely for silt storage and may possess considerable benefits for recreation. The estimated length of the main canal is 30 miles. One of its major structures will be an inverted siphon across the Cheyenne River.

The project lands, comprising approximately 16,210 acres, are located in the Cheyenne River Valley easterly of Hot Springs. The area was settled in the early nineties in 160-acre homesteads. Fair crops and small grains have been raised under favorable conditions, but crop failures have occurred in nearly every year since 1931 due to subnormal precipitation. Many of the original homesteaders have been forced to sell their properties, and as a result the land holdings in single ownership are now quite large.

The project will contribute toward the solution of problems arising out of interstate movements of agricultural populations by providing farms for farm peoples who have been forced to leave other submarginal farm areas, and by stabilizing the farm economy of the farm areas comprising the unit. The project will also contribute toward the solution of the unemployment problem by providing considerable employment in its construction stages, and should contribute to the permanent solution of this problem in the vicinity of the unit by the stabilization of its agricultural economy.

PARTICIPATION OF FEDERAL AGENCIES

It is proposed that the Bureau of Reclamation will construct the dam, reservoir and appurtenant works, the distribution system and the drainage features. The present plan, subject to change, is that the Bureau also will operate the irrigation works

after they are built, and will negotiate contracts with the water users for the repayment of the construction charges.

The Secretary of Agriculture has been consulted regarding participation in the proposed project by the Department of Agriculture, and a report to you by the Secretary of Agriculture on the participation of that Department is transmitted herewith. As shown in that report, the Department of Agriculture proposes to participate in the project development, pursuant to a cooperative agreement with the Secretary of the Interior: (1) by arranging for the settlement of the project on a sound agricultural basis, and in so far as practicable by locating on the project persons in need; (2) by extending guidance and advice to settlers on the project in matters of farm practice, soil conservation, and efficient land use; (3) by acquiring agricultural lands within the boundaries of the project; and (4) by arranging for the improvement of lands within the project boundaries, including clearing, leveling, and preparing the lands for distribution of irrigation water. A copy of the cooperative agreement is attached.

For the construction and development of the project, the Work Projects Administration and the Civilian Conservation Corps are expected to provide most of the labor, and a small amount of materials, supplies and equipment. A letter from the Work Projects Administration is enclosed. It will be noted therefrom that approximately 250 certified workers can be made available during the fiscal year for the execution of the project.

CONTRIBUTIONS BY NON-FEDERAL AGENCIES

The Board of County Commissioners of Fall River County has indicated its willingness to provide the major part of the rights of way and to make the road and highway changes required by the construction of the irrigation works. These contributions are necessary and in my judgment are acceptable under Section 2 of the act of October 14, 1940.

ESTIMATED COST AND FINANCING PROCEDURE

The total estimated cost of the project, exclusive of non-Federal contributions, is \$3,938,000, of which \$3,300,000 is planned to be used for the construction of works by the Bureau of Reclamation, and \$638,000 for land acquisition and development by the Department of Agriculture. Funds amounting to \$1,450,000 for construction and \$448,000 for land acquisition and development, totalling \$1,898,000, are expected to be allotted from appropriations made under the authority of the act of August 11, 1939, and its amendments. The remaining \$2,040,000 of the total estimated cost is the amount of Federal funds which is expected to be expended by the Work Projects Administration or the Civilian Conservation Corps, or both, and which will be made available to the project through surveys, labor, materials, or other property including money, supplied by one or both of these agencies. A tabulation giving the breakdown of the estimated cost and the proposed financing procedure is attached.

The Interior Department Appropriation Act, 1941, contains an appropriation of \$3,500,000 which was made pursuant to the authority of the act of August 11, 1939. The estimated requirements for the Angostura project during the fiscal year 1941 are \$250,000 for construction by the Bureau of Reclamation, and \$200,000 for land acquisition and land development by the Department of Agriculture. The amount needed by the Department of Agriculture cannot be transferred to it from said appropriation of \$3,500,000, according to a ruling of the Comptroller General. However, the Department of the Interior is ready to join the Department of Agriculture in a recommendation to the Congress that by appropriate action it make available to the Department of Agriculture, pursuant to Section 12 (2) of the Act of October 14, 1940, such part of the \$3,500,000 appropriation item as is deemed necessary to meet the requirements of the Department of Agriculture on this and similar projects in the fiscal year 1941.

SIZE OF FARM UNITS

Section 4 (c) (5) of the act of October 14, 1940, provides that the Secretary of the Interior "shall establish the size of farm units of irrigable lands on each project in accordance with his findings of the area sufficient in size for the support of a family on the lands to be irrigated." Surveys of the irrigable area of the project are now under way and, although not yet completed, they have progressed sufficiently that I am able to determine that the maximum size of farm units for the project will be not more than 160 acres. The exact size of the farm units, which will vary somewhat over the project area in accordance with varying conditions of the irrigable lands, will be established after completion of the surveys. It has been agreed that the Department of Agriculture will investigate and survey the economic size of farm units for the Angostura project, and that its report and conclusions based on these studies will be made available to me.

CONDITIONS PRECEDENT TO CONSTRUCTION

The success of the project will be better assured if certain steps, not specifically stated in the act of October 14, 1940, are made conditions precedent to the commencement of actual construction of physical features. The cost estimates given herein do not cover costs of rights of way proposed to be furnished by the Board of County Commissioners of Fall River County, and such construction should not be started until the participation by the County is fully assured. Neither should such construction proceed until the Department of Agriculture has made sufficient progress in obtaining control of lands reasonably to insure the reduction of large private holdings into units not exceeding the size to be established under Section 4(c) (5) of the Act, thus providing benefits for the maximum number of settlers.

FINDINGS, CERTIFICATIONS AND RECOMMENDATIONS

Based on the foregoing report and supporting data concerning the proposed project, I make the following findings and certifications:

1. I find and certify that the proposed project has engineering feasibility.
2. I find that the estimated cost of the proposed construction is \$3,300,000, which is exclusive of the cost of participation by the Department of Agriculture now estimated at \$638,000, and of non-Federal contributions.
3. I find that the estimated cost which properly can be allocated to irrigation is \$3,300,000 (construction of irrigation features is estimated to require \$1,450,000 from General Fund appropriations, and \$1,850,000 from WPA or CCC funds, or from both).
4. I find that the estimated expenditures from appropriations made under the Act of August 11, 1939, as amended, to meet reimbursable construction costs allocated to irrigation do not exceed \$1,000,000 for dams and reservoirs on the project.
5. I find that no part of the estimated cost can properly be allocated to municipal or miscellaneous water supplies or power with the expectation that it probably will be returned to the United States in revenues therefrom.
6. I find that the water users probably can repay, in accordance with the requirements of Section 4 of the Act of October 14, 1940, \$1,450,000, which is equal to that part of the estimated cost allocated to irrigation to be met by expenditure of moneys appropriated pursuant to the Act of August 11, 1939, and the amendments thereto.
7. I find that no part of the estimated cost can properly be allocated to the irrigation of Indian trust and tribal lands, or to flood control.

I recommend that you approve the foregoing report and findings, and that you find, by your approval of this report, that services, labor, materials, easements and other property, including money, for the construction of the project, should be made available to the Department of the Interior and to the Department of Agriculture by the Work Projects Administration, the Civilian Conservation Corps, or other Federal agencies, to the extent necessary to make up the difference between the overall estimated costs of the project and the part thereof to be met by expenditures of moneys appropriated under the provisions of the Act of August 11, 1939, and its amendments. I also recommend that by your approval of this report you determine that the United States shall be reimbursed for such services, labor, *et cetera* made available to the Department of the Interior in such amounts, if any, as on final determination of construction costs will not increase the repayment obligations beyond \$1,450,000. The Department of Agriculture recommends that by your approval of this report you determine that the United States not be reimbursed for such services, labor, *et cetera* as are made available to that Department for utilization on this project.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved March 6, 1941.

THE WHITE HOUSE,

(Signed) FRANKLIN D. ROOSEVELT,
President.

KORTES UNIT

Kortes power development was found feasible as a supplement to Kendrick project by the Secretary of the Interior on November 26, 1941, but was later authorized as part of the Missouri River Basin project under the terms of the Flood Control Acts of 1944 and 1946 and was constructed as a part of this project.

BUREAU OF RECLAMATION,
Washington, November 10, 1941.

THE SECRETARY OF THE INTERIOR.

SIR: There is transmitted herewith a copy of a report dated October, 1941, prepared by the Chief Engineer, Bureau of Reclamation, on the proposed Kortes power development, Kendrick, Wyoming.

The proposed development comprises a concrete gravity dam 197 feet in height at a site on the North Platte River 2.1 miles below the existing Seminole Dam, a pressure tunnel 750 feet long with a capacity of 2,150 cubic feet per second leading to the power plant which will have an installed capacity of 30,000 kilowatts in three units and a transmission line to Loveland, Colorado, with a connection to Seminole power plant. The estimated construction cost under present high prices is \$8,310,000. The estimated cost of construction under normal conditions is \$7,045,000.

On the basis of present high prices the annual cost of the project will be \$517,000 including amortization of investment in 40 years with interest at 3%. The plant will produce 101,000,000 kilowatt-hours of firm energy and an average of 61,000,000 kilowatt-hours of secondary, annually, which will have a value of \$564,000 or \$47,000 greater than annual costs. The power will be marketed over the interconnected system of the Shoshone, Riverton, Kendrick, North Platte and Colorado-Big Thompson projects. The entire output of the plant should be absorbed soon after it is completed.

On the basis of the foregoing I recommend that you find the Kortes power development feasible and transmit copies of the report to the President and the Congress as provided by Section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

Respectfully,

(Signed) H. W. BASHORE,
Acting Commissioner.

OFFICE OF THE SECRETARY,
Washington, November 26, 1941.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: In accordance with the provisions of Section 9 (a) of the Reclamation Project Act of 1939, Act of August 4, 1939 (53 Stat. 1187), this report and finding is made on the Kortès power development proposed to be constructed as works supplemental to the Kendrick Project, Wyoming. The report was prepared in the office of the Chief Engineer, Bureau of Reclamation, and is based on studies and investigations conducted by the Bureau of Reclamation. I hereby approve and adopt it.

Based on this report, I find that: the supplemental works are feasible from an engineering standpoint; the estimated cost is \$8,310,000 based on present high prices and \$7,045,000 based on prices under normal conditions; the entire cost properly should be allocated to power and an amount greater than the cost, under present high prices, will probably be returned to the United States in net power revenues.

Similar letters and copies of the report will be submitted to the President of the Senate and the Speaker of the House of Representatives upon advice from the Director of the Bureau of the Budget that such submission is in accord with your program. This procedure is to conform with the provisions of the Executive Order of June 26, 1940.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

GLENDON UNIT

Joint Resolution to provide for construction by the Secretary of the Interior of the Glendon Unit, Wyoming, Missouri River Basin project. (Act of July 16, 1954, 68 Stat. 486, Public Law 503, 88d Cong., 2d sess.)

Whereas construction by the Secretary of the Interior of a dam and reservoir at the Glendon site on the North Platte River in Wyoming was authorized by section 9, subsection (c) of the Act of December 22, 1944 (58 Stat. 641, 653); and

Whereas the Interior Department Appropriation Acts for 1954 and several previous years have provided that "in order to promote agreement among the States of Nebraska, Wyoming, and Colorado, and to avoid any possible alteration of existing vested

water rights, no part of this or of any prior appropriation shall be used for construction or for further commitment for construction of the Glendo unit or any feature thereof, until a definite plan report thereon has been completed, reviewed by the States of Nebraska, Wyoming and Colorado, and approved by Congress"; and

Whereas a definite plan report was completed by the Bureau of Reclamation in December 1952, reviewed by the States aforesaid, and approved by Wyoming on March 5, 1953, by Colorado on March 31, 1953, and by Nebraska on May 19, 1953; thus substantially complying with the provision of section 1 of the Flood Control Act of 1944; and

Whereas the said definite plan report was approved by the Secretary of the Interior on February 19, 1954, and transmitted to the Congress by him on April 2, 1954; and

Whereas the Secretary of the Interior has found the Glendo unit to be economically and financially feasible and has recommended its early construction; and

Whereas, as appears in the stipulation signed on behalf of the States of Nebraska, Wyoming, and Colorado and of the United States on January 14, 1953, the prospect of construction of the Glendo unit as now proposed played an important part in the negotiations of said parties looking toward an amicable modification of the decree of the United States Supreme Court entered in the case of Nebraska versus Wyoming (325 U. S. 665); and

Whereas the United States Supreme Court has approved said stipulation and modified its decree in accordance therewith (345 U. S. 981): Now, therefore, be it

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That the definite plan report on the Glendo unit, Missouri River Basin project, approved by the Secretary of the Interior on February 19, 1954, is hereby approved by the Congress, and the Secretary is authorized to construct and operate said unit in accordance with said report and with the modified decree of the United States Supreme Court in the case of Nebraska versus Wyoming (345 U. S. 981) and, through its physical and financial coordination and integration with the other Federal works constructed or authorized to be constructed under the comprehensive plans approved by section 9 of the Act of December 22, 1944 (58 Stat. 641, 653), as amended and supplemented, with the financial objective of returning its reimbursable costs during a fifty-year payment period.

SEC. 2. With respect to the Glendo unit, the provisions of section 1 (c) of the Flood Control Act of 1944 are hereby waived.

AINSWORTH, LAVACA FLATS, MIRAGE FLATS EXTENSION, AND O'NEILL UNITS

An act to provide for the inclusion of the Ainsworth, Lavaca Flats, Mirage Flats Extension, and O'Neill irrigation developments in the Missouri River Basin project. (Act of August 21, 1954, 68 Stat. 757, Public Law 612, 83d Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Missouri River Basin project, heretofore authorized by section 9 of the Act of December 22, 1944 (58 Stat. 887, 891), and section 18 of the Act of July 24, 1946 (60 Stat. 641, 653), is hereby reauthorized and extended to include the Ainsworth, Lavaca Flats, Mirage Flats Extension, and O'Neill units. The Secretary shall cause these units of the Missouri River Basin project to be coordinated and integrated, physically and financially, with the other Federal works constructed or authorized to be constructed under the comprehensive plans approved by section 9 of the Act of December 22, 1944, as amended and supplemented.

SEC. 2. Construction of the units herein authorized to be included in the Missouri River Basin plan shall not be undertaken until a report demonstrating their physical and economic feasibility has been completed, reviewed by the affected States, and approved by the Congress.

RED WILLOW DAM

An act to provide for transfer of administrative jurisdiction over Red Willow Dam and Reservoir, Nebraska, to the Secretary of the Interior and over Wilson Dam and Reservoir, Kansas, to the Secretary of the Army. (Act of May 2, 1956, 70 Stat. 126, Public Law 505, 84th Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That administrative jurisdiction over the construction, operation, and maintenance of Red Willow Dam and Reservoir, Nebraska, an authorized unit of the Missouri River Basin project (Act of December 22, 1944, sec. 9, 58 Stat. 887, as amended and supplemented), is hereby transferred from the Secretary of the Army to the Secretary of the Interior and jurisdiction over the construction, operation, and maintenance of Wilson Dam and Reservoir, Kansas, another authorized unit of the same project, is hereby transferred from the Secretary of the Interior to the Secretary of the Army. The principal purposes of Red Willow Dam and Reservoir shall be those of making available a regulated supply of water for irrigation and of assisting in the control of floods, and the principal purposes of Wilson Dam and Reservoir those of flood control and of assisting in making available a

regulated supply of water for irrigation and low-flow regulation: *Provided*, That no expenditure of funds shall be made for construction of such projects until the Secretary of the Interior, in the case of the Red Willow Dam and Reservoir, Nebraska, and the Secretary of the Army, in the case of the Wilson Dam and Reservoir, Kansas, with the approval of the President, have submitted to the Congress completed reports demonstrating such projects to be economically justified, and the Congress has approved such reports.

SEC. 2. Both the Secretary of the Interior and the Secretary of the Army shall cause these units of the Missouri River Basin project to be coordinated and integrated physically and financially with the other Federal works constructed or authorized to be constructed under the comprehensive plans approved by section 9 of the Act of December 22, 1944, aforesaid, as amended and supplemented.

SEC. 3. Notwithstanding any other provisions of this Act, the Secretary of the Army shall, in the case of the Red Willow Dam and Reservoir, be responsible for flood-control regulation as provided in section 7 of the Act of December 22, 1944, and the Secretary of the Interior shall, in the case of Wilson Dam and Reservoir, be responsible for the disposal of water for irrigation or space reserved for this purpose in accordance with the Federal reclamation laws.

AINSWORTH UNIT

An act to provide for the approval of the report of the Secretary of the Interior on the Ainsworth unit of the Missouri River Basin project. (Act of May 18, 1956, 70 Stat. 160, Public Law 531, 84th Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the report approved by the Secretary of the Interior on November 21, 1955, demonstrating the physical and economic feasibility of the Ainsworth unit of the Missouri River Basin project, integrated as a part of said project by the Act of August 21, 1954 (68 Stat. 757), is hereby approved: *Provided*, That for a period of ten years from the date of enactment of this Act, no water from the project authorized by this Act shall be delivered to any water user for the production on newly irrigated lands of any basic agricultural commodity, as defined in the Agricultural Act of 1949, or any amendment thereof, if the total supply of such commodity for the marketing year in which the bulk of the crop would normally be marketed is in excess of the normal supply as defined in section 301 (b) (10) of the Agricultural Adjustment Act of 1938, as amended, unless the Secretary of Agriculture calls for an increase in production of such commodity in the interest of national security.

FARWELL UNIT

An act to reauthorize construction by the Secretary of the Interior of Farwell unit, Nebraska, of the Missouri River Basin project. (Act of August 3, 1956, 70 Stat. 975, Public Law 952, 84th Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the authorization for construction, operation, and maintenance of the Farwell unit of the Missouri River Basin project contained in section 9 (c) of the Act of December 22, 1944 (58 Stat. 887), as amended and supplemented, is hereby amended to authorize the construction, operation, and maintenance of works to furnish irrigation water for approximately fifty-two thousand five hundred acres of land in Howard, Sherman, and Valley Counties, Nebraska. The principal works of said unit shall consist of a reservoir at or near the Sherman site, works for the diversion of water from the Middle Loup River and its delivery to said reservoir, and necessary pumping facilities, canals, drains, and related works. There shall also be included as a part of the Farwell unit such watershed management and channel works as are necessary to provide channel stability in the light of the anticipated application of irrigation water to the lands involved and appropriate portions of the costs of constructing, operating, and maintaining such works shall be allocated to irrigation and returned in the same manner and under the same conditions as other irrigation costs of the Missouri River Basin project: *Provided*, That any contract entered into under section 9, subsection (d), of the Reclamation Project Act of 1939 (53 Stat. 1187, 1193, 43 U. S. C., sec. 485 (h)) for payment of those portions of the costs of constructing, operating, and maintaining the Farwell unit which are allocated to irrigation and assigned to be repaid by the contracting organization may provide for the repayment of the portion of the construction cost assigned to any project contract unit or, if the contract unit be divided into two or more irrigation blocks, to any such block over the period specified in said section 9 (d) or as near thereto as is consistent with the adoption and operation of a variable payment formula which, being based on full repayment within the period stated under normal conditions, permits variance in the required annual payments in the light of economic factors pertinent to the ability of the organization to pay. The Farwell unit shall be integrated, physically and financially, with the other Federal works in the Missouri River Basin constructed or authorized to be constructed under the comprehensive plan approved by section 9 of the Act of December 22, 1944, as amended and supplemented. The Secretary is authorized to transfer to the Department of Agriculture from funds available for construction of the Farwell unit such sums as are reasonably required to construct necessary water management and channel works as hereinbefore provided.

MOON LAKE PROJECT

UTAH

The Moon Lake project ¹ was found feasible by the Secretary on January 11, 1935, and approved by the President on November 6, 1935, pursuant to section 4 of the act of June 25, 1910 (36 Stat. 836), and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702).

OFFICE OF THE SECRETARY,
Washington, November 1, 1935.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The Supreme Court of the United States in the Parker Dam decision (*United States v. State of Arizona*) indicated that Section 4 of the Act of June 25, 1910, 36 Stat., 835, is applicable to irrigation projects constructed under the National Industrial Recovery Act, and this report upon the Moon Lake project, Utah, is made to you under said statute of 1910 and under Subsection B of Section 4 of the Act of December 5, 1924, 43 Stat., 701.

Section 4 of the Act of June 25, 1910, provides, in effect, that after the date of that act no irrigation project to be constructed under the Act of June 17, 1902, 32 Stat., 388, and acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924, 43 Stat., 701, provides as follows:

That no new projects or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering

¹ The *Moon Lake Project* was initiated under the provisions of the National Industrial Recovery Act of 1933.

features, the cost of construction, land prices and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

Under date of November 29, 1933, I approved an allotment of \$1,500,000 for the construction of the Moon Lake Project, all of which is still available or has been expended toward the construction of the project. The water to be developed by the project will be used for the irrigation of privately owned lands already under irrigation in what is commonly known as the Uintah Basin. The lands are under some nine or ten existing canal companies which have recently formed the Moon Lake Water Users' Association and which association has entered into a contract with the United States to repay the cost of the project.

The lands of the project were first settled in 1905 when the Uintah Basin was opened to entry. Most of the area in the basin west of the Ashley Valley is irrigated from the waters of the Uintah, Lake Fork and Duchesne Rivers. There are approximately 85,000 acres of private lands of which 65,000 acres will be benefited by the project. Indian lands in the vicinity of the project which control the prior water rights of all these three streams are fairly well irrigated in most years, while practically all of the private lands experience severe water shortages during the summer seasons of every year. It is the purpose of the Moon Lake Project to furnish an additional water supply for these private lands in order that the severe water shortages may be reduced or eliminated so far as possible.

The furnishing of additional water for the project lands will be accomplished by the construction of the Moon Lake Reservoir on the Lake Fork River for the storage of 30,000 acre feet of water, the construction of the Yellowstone feeder canal from the Lake Fork river to the Uintah river, a distance of 34 miles; the construction of the Duchesne feeder canal from the Duchesne river to the Lake Fork river, a distance of 22 miles; and the construction of the Midview reservoir. The capacity of this latter reservoir is 5,000 acre feet, but the plan of use contemplates that it will be filled twice each season.

The Moon Lake reservoir, which is now being constructed by contract under the allotment previously mentioned, will be used to furnish water during the middle and late summer months to the stockholders of the Association. The Duchesne feeder canal will be used to divert surplus water from the Duchesne river to the Indian lands in the vicinity of Arcadia and to the Lake Fork river. In both cases water will be furnished to Indian lands thereby making possible the diversion of a like quantity of Indian water by exchange to the higher lands of the Moon Lake Project, and thus make a more economical and advantageous use of the available water supply.

The Midview reservoir will be used in conjunction with the operation of the Duchesne feeder canal. The Yellowstone feeder canal will be used to divert water from the Lake Fork river to

those lands of the project at present inadequately served by the Uintah river.

What is mentioned as Moon Lake project lands are lands which lie under certain existing canals owned by canal and irrigation companies which are participating in the repayment of the cost of constructing the project through and by subscribing for stock to the Moon Lake Water Users' Association.

Studies and investigations made by the Bureau of Reclamation indicate that the water supply is adequate for the purpose intended, that the construction of the dams and canals is feasible from an engineering standpoint, that the project can be built within the allotment of \$1,500,000 which the Association has agreed to repay (although in the repayment contract the construction of all works except the Moon Lake dam were only contingently provided for) due to the fact that considerable of the work in the construction of the Duchesne feeder canal, Midview reservoir and the Yellowstone feeder canal is being done by CCC camps.

I find that the project is feasible, that the land watered thereby is adaptable for actual settlement and farm homes, that the lands are badly in need of an additional water supply, that the continued existence of the community depends upon the furnishing of an additional water supply as contemplated by the project, and that the project will probably return the cost thereof to the United States.

I recommend that the project consisting of the Moon Lake reservoir, Duchesne feeder canal, Yellowstone feeder canal and Midview reservoir, and which is already under process of construction, be approved, that any steps or action heretofore taken toward the construction of the same be ratified, and that authority be issued to this Department to proceed with the work and to make contracts and take any necessary action to construct and complete the project.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved November 6, 1935.

(Signed) FRANKLIN D. ROOSEVELT,
President.

NEWLANDS PROJECT

NEVADA

The Newlands project, originally called Truckee or Truckee-Carson project, was authorized by the Secretary under the Reclamation Act of 1902 on March 14, 1903; examined and reported upon by a Board of Army Engineers and approved by the President on January 5, 1911, pursuant to the Act of June 25, 1910 (36 Stat. 835). See the Director's recommendation of March 7, 1903 (p. 10), and the Secretary's authorization of March 14, 1903 (p. 14).

The Truckee-Carson project was renamed the Newlands project by the Secretary on February 27, 1919.

NEWTON PROJECT

UTAH

The Newton project was found feasible by the Acting Secretary on October 12, 1940, and approved by the President on October 17, 1940, under the terms of the Water Conservation and Utilization Act of August 11, 1939, as amended. Completion of the project was approved by the President on August 31, 1943.

THE SECRETARY OF THE INTERIOR,
Washington, October 12, 1940.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: In accordance with the requirements of the Act of August 11, 1939 (53 Stat. 1418), as amended, I submit this report on the Newton irrigation project in Cache County, Utah, and request your approval of the findings and certifications contained herein.

PROJECT PLAN

The proposed work involves the construction of a reservoir of 5,200 acre-feet capacity on Clarkston Creek to supplement the water supply for 1,660 acres of irrigated land and to provide a full water supply for 565 acres of good, arable land near Newton, Utah. An area near the town of Clarkston, above the reservoir site, also will participate in the project to a minor extent. The lands are all under cultivation and for the most part under ditch, but because of lack of late season water cannot be intensively farmed. Construction of the project will assist greatly in stabilizing the agricultural and economic situation of the area. The principal engineering feature will be an earth-filled dam 109 feet high above the stream bed and 640 feet long on the crest. The water distribution system has already been constructed.

PARTICIPATION OF FEDERAL AGENCIES

It is proposed that the Bureau of Reclamation will construct the dam, reservoir and appurtenant works. The present plan, subject to change, is that the Bureau of Reclamation also will operate the dam after it is built and negotiate contracts with the water users for the repayment of construction charges. The Department of Agriculture plans to make a detailed survey of the agricultural pattern of the project to determine the part it can take in the rehabilitation of the area. This will include a study of the present water use and irrigation practices, farm ownership, operating units and tenure agreements, and cropping practices. The Work Projects Administration and the Civilian Conservation Corps are expected to provide most of the labor and a small amount of materials, supplies and equipment. A report to you from the Work Projects Administration on the extent of its proposed participation is enclosed. The Department of Agriculture has advised that its proposed participation is discussed in a letter to me dated September 19, 1940, and that this letter, a copy of which is enclosed, may be used as its report to you. Until appropriations are made to the Department of Agriculture for its participation, it is planned that allocations from appropriations made under the authority of the Act of August 11, 1939 (53 Stat. 1418), will be made to the Bureau of Reclamation and that the Department of Agriculture will be reimbursed for services by the Bureau of Reclamation through transfers or advancement of funds from the allocations.

ESTIMATED COST

The total estimated cost of the project is \$618,000, of which \$223,000 is expected to be obtained from appropriations made and to be made under the authority of the Act of August 11, 1939, and the amendments thereto, and \$395,000 through work accomplished by the Work Projects Administration or the Civilian Conservation Corps or both. The construction of works by the Bureau of Reclamation will require \$595,000, and the survey by the Department of Agriculture, \$23,000. Included in this latter sum are funds for the field investigations and surveys as well as any development planning and guidance work which may be found necessary when the project is completed. A tabulation, giving the estimated breakdown of expenditures, is attached. If forces from the Civilian Conservation Corps are used, the amount to be expended by the Work Projects Administration and the Civilian Conservation Corps is estimated to equal that shown for expenditure by the Work Projects Administration. However, the breakdown under the various features would probably not be the same, due to the differences in administrative procedures of the two agencies and the legislation which applies to them. Out of the \$3,500,000 made available by the Interior Department Appropriation Act of 1941, it is estimated that \$150,000 will be needed for work to be accomplished in the fiscal year 1941.

ALLOCATION OF COSTS

The total estimated cost of the proposed construction can be properly allocated to irrigation. The reservoir will have no material influence on the floods and no flood control allocation is justified. There are no opportunities for profitable power development and no part of the cost should be allocated to power or to municipal or miscellaneous water supplies. Indian lands are not involved. It is believed that the water users can repay in 40 annual installments, following a short development period, the entire allotment from funds made available under the Act of August 11, 1939, and the amendments thereto, now estimated at \$215,000, and in addition not to exceed \$135,000 of the funds expended for construction by the Work Projects Administration and the Civilian Conservation Corps. The expenditures by the Department of Agriculture estimated at \$8,000 from the general fund appropriation would be repaid in accordance with section 5 of the Act as amended.

FINDINGS, CERTIFICATIONS AND RECOMMENDATIONS

Based on the foregoing report and other data available to me concerning the proposed project, I make the following findings and certifications:

1. I find and certify that the proposed project has engineering feasibility.
2. I find that the estimated cost of the proposed construction is \$595,000, exclusive of the cost of participation by the Department of Agriculture, which is estimated at \$23,000.
3. I find that the entire estimated cost of the project is properly allocated to irrigation; and that no part of the costs can properly be allocated to municipal or miscellaneous water supplies, power, irrigation of Indian trust and tribal lands, or to flood control.
4. I find and certify that the water users probably can repay in 40 annual installments, following a short development period, the entire amount to be expended from moneys appropriated as authorized by the Act of August 11, 1939, as amended, estimated at \$215,000, and in addition not to exceed \$135,000 of the funds expended by the Work Projects Administration and the Civilian Conservation Corps.

I recommend that you approve the foregoing report and findings; and I recommend that you find, by your approval of this report that services, labor, materials, easements and other property, including moneys for the construction of the project should be made available to the Department of the Interior by the Work Projects Administration, the Civilian Conservation Corps, or other Federal agencies in the amount found necessary by me to make up the difference between the estimated cost of the project construction and the amount which will be allocated from appropriations made under the provisions of the Act of August 11, 1939, and the amendments thereto.

Sincerely yours,

(Signed) A. J. WIRTZ,
Acting Secretary of the Interior.

Approved October 17, 1940.

(Signed) FRANKLIN D. ROOSEVELT,
President.

THE SECRETARY OF THE INTERIOR,
Washington, August 9, 1943.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: There is presented herein, for your approval, a proposal to complete and to bring into operation, the Newton irrigation project in Cache County, Utah, under the provisions of the act of October 14, 1940 (54 Stat. 1119), as amended by Public 152, approved July 16, 1943. The construction of this project, which you approved on October 17, 1940, would involve the development of a supplemental water supply for 1660 acres of irrigated land and a full water supply for 565 acres of new land. A copy of the report and findings which you approved is enclosed.

STATUS OF CONSTRUCTION

The major construction feature of the project is an earth and rock fill dam. Practically all of the concrete had been placed in the outlet works structure, stripping of the dam foundation had been finished, the cutoff trenches along the foundation of the dam had been excavated and refilled with compacted embankment, and the embankment of the main dam section had been started when the War Production Board ordered the work halted in December 1942. Practically all of the construction equipment was left at the site and is available to complete the work. Most of the critical materials are on hand, future construction requiring only 32 tons of steel, some wire rope, nails, and repair parts for construction equipment, and similar items estimated to cost \$22,000. On February 26 the Bureau of Reclamation requested the War Production Board to reconsider the stop order so that construction might be resumed on the new dam, which is approximately one mile downstream from the old dam which had deteriorated to such an extent that the State Engineer had prohibited further storage behind it.

CONDITION OF EXISTING DAM

Construction of a dam at the site of the existing dam was started in 1871, but because of improper construction it failed three times. The existing dam was completed in 1886, but has progressively deteriorated. Sloughing has occurred on both the upstream and downstream faces of the embankment to such an extent that in places the crest has less than half of its original width and the downstream slope is unstable. Heavy rainfall during the past winter caused the collapse and destruction of the

wooden spillway structure, and serious settlement cracks developed in the dam abutments. A considerable length of outlet conduit has failed sufficiently to allow water to escape along the outside of the barrel. The consequent slow removal of adjacent embankment materials constitutes a further serious hazard to the dam structure.

Failure of the existing dam prior to completion of the new dam would remove some 1600 acres of good agricultural land from production, and cause a partial loss of water supply to other productive lands. A part of the work already completed on the new dam would be lost; a high fill and bridge over Newton Creek, near the town of Newton, would be destroyed, and considerable damage would result to buildings and property in the town of Newton. The main line of the Union Pacific Railroad between Salt Lake Valley and Idaho would be washed away at several points. Repair of the existing dam is considered to be an undesirable alternative to completing the new dam because the required expenditures in critical materials and money would approximate the requirements for completion of the new dam, and the repair work would be only of a temporary nature.

ESTIMATED COST AND FINANCING PROCEDURE

When you approved this project for construction on October 17, 1940, it was estimated that the total cost of construction would be \$595,000, of which the Work Projects Administration would furnish \$380,000 in the form of labor and some materials. Local interests agreed to pay \$350,000 of the construction cost. Advancing costs during the period immediately following your approval, delays in shipping and transportation which retarded delivery and added to the overhead costs, and the loss of trained personnel made it apparent that an additional allotment would be required to complete the project, of which it was estimated \$50,000 would be returned to the project upon completion through the transfer of equipment to other projects. Consequently, on October 10, 1941, the Acting Secretary of the Interior approved an additional allotment of \$100,000 from the appropriation for Water Conservation and Utility Projects, making a total allotment of \$315,000 instead of \$215,000 as originally contemplated. This amount would be repaid by the interests who are to be benefited under the terms of the repayment contract dated August 29, 1941, which fixes their obligation at \$350,000.

Of the total cost, \$315,000 has been allotted from the appropriation for Water Conservation and Utility Projects. Since the Non-Industrial Facility Committee of the War Production Board on July 24 approved the resumption of work on the project, I propose to allot an additional \$35,000 from the above appropriation so that construction can proceed immediately. The Work Projects Administration furnished labor and materials to the value of \$85,000 out of its originally estimated contribution of \$380,000. Instead of \$295,000 (\$380,000-\$85,000) it is now believed that an

additional \$275,000 will be sufficient to complete the project. If you approve continuation of construction, it is proposed to allot this sum (\$275,000) from the appropriation for Water Conservation and Utility Projects, in lieu of the Work Projects Administration contribution, and to continue construction in accordance with Section 5 of the act of July 16, 1943, Public 152. Sufficient funds for this purpose have been appropriated and are now available for allotment.

CONSULTATION WITH THE WAR FOOD ADMINISTRATOR

On March 2, 1943, I transmitted to the Secretary of Agriculture, for his consideration, an optimum five-year program covering the production of certain critical war foods in which the bureaus of the Department of the Interior have special administrative responsibilities. The Newton project was among the irrigation projects recommended for consideration, and on April 16, detailed information was submitted to the War Food Administrator. On May 5, 1943, the War Food Administrator transmitted a list of ten projects, including Newton, to the Chairman of the War Production Board and on May 10 he recommended an immediate rescinding of the stop construction orders and that adequate priorities for rating materials be granted to permit early resumption of work on the Newton and three other projects. A copy of the letter of May 10, is enclosed.

FINDINGS AND RECOMMENDATIONS

Reimbursable costs were heretofore fixed at \$350,000 in the finding made pursuant to subsection 3 (a) (IV) of the act of October 14, 1940. Within the limits of the authority of the act of July 16, 1943, I shall make adjustments in the project construction costs to the extent necessary to keep the reimbursable costs in conformity with that finding.

I have consulted with the War Food Administrator, acting in the stead of the Secretary of Agriculture, concerning the justification of this project. Based on these consultations and on the information available to me concerning the project, I find that the proposed construction is justifiable as an aid in the production of needed agricultural products.

I recommend that you approve this report and finding.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved August 31, 1943.

(Signed) FRANKLIN D. ROOSEVELT,
President.

THE WHITE HOUSE,
Washington, August 31, 1943.

The Honorable, the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This will acknowledge the receipt of your letter of August 9, 1943, together with supporting data, addressed to me through the Bureau of the Budget, requesting authorization for continuing the construction of the Newton irrigation project in Cache County, Utah, to completion, under the provisions of the Water Conservation and Utilization Act, as amended on October 14, 1940 and July 16, 1943, at an estimated total net cost of \$660,000.

Due to the apparent urgent necessity for this facility, as stated by you and the War Food Administrator, I hereby approve the continuation of construction of this project under the terms and conditions recommended.

Sincerely yours,

(Signed) FRANKLIN D. ROOSEVELT,
President.

NORTH PLATTE PROJECT

WYOMING-NEBRASKA

The North Platte project, originally called the Sweetwater project, was authorized by the Secretary on March 14, 1903, under the Reclamation Act of 1902; examined and reported upon by a Board of Army Engineers and approved by the President on January 5, 1911, pursuant to the act of June 25, 1910 (36 Stat. 835). See the Director's recommendation of March 7, 1903 (p. 8), and the Secretary's authorization of March 14, 1903 (p. 14).

Guernsey Dam and power plant were found feasible by the Secretary on April 29, 1925, and approved by the President on April 30, 1925, pursuant to section 4 of the act of June 25, 1910 (36 Stat. 836) and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702).

PATHFINDER DAM

DEPARTMENT OF THE INTERIOR,
Washington, May 3, 1904.

THE DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: In a letter of the 2d instant to the Department you called attention to the authorization given you in departmental letter of March 14, 1903, to proceed with the work incident to the construction of five projects under the act of June 17, 1902 (32 Stat. 388), one of them being the Sweetwater project, Wyoming, and with reference to which project you have stated that the site first selected was not so favorable as a site lower down at the mouth of the Sweetwater River on North Platte, Wyo.

You have reported that work was therefore transferred to the point mentioned and that it now appears that the Pathfinder Reservoir site, so-called, is probably the most desirable location for a storage dam, that the capacity of the Pathfinder Reservoir will approximate 1,000,000 acre-feet, that the cost of the dam will be, approximately, \$1,000,000, and you have recommended that formal approval be granted for the construction of the Pathfinder Reservoir and that \$1,000,000 be set aside for the construction of the reservoir, contingent on favorable report on details of construction and of lands to be reclaimed thereby.

On consideration of the facts presented by you and in view of your recommendations I hereby authorize you to proceed with the construction of the Pathfinder Reservoir and the work incident thereto, and the sum of \$1,000,000, or so much thereof as may be necessary, is hereby set aside from the fund provided by the act mentioned, for use in construction of this reservoir, contingent on favorable reports on details of construction and of lands proposed to be reclaimed.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

FORT LARAMIE UNIT

DEPARTMENT OF THE INTERIOR,
UNITED STATES RECLAMATION SERVICE,
Washington, D. C., May 15, 1912.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: With reference to the North Platte project, Nebraska, the Pathfinder Reservoir has been completed with a capacity of a little over 1,000,000 acre-feet and the North Side or Interstate Canal has been built requiring roughly about one-third of the capacity of this reservoir.

The original plans contemplated constructing a canal on the south side of the river; the so-called Whalen Dam at the head of the Interstate Canal was built so that water could be diverted from the south side as well as into the Interstate Canal on the north side.

The best location of canal on the south side has not been as obvious as that on the north side; surveys and examinations have been conducted through a number of years, studying the alternative locations, all of which present certain unfavorable features or items of extraordinary cost.

Among the alternatives considered has been a high line canal heading above the Whalen Dam and covering the so-called Goshen Hole. This canal line is through extremely rough country and in it the construction of many miles of tunnel is involved. It has not been deemed feasible to undertake a work of this magnitude and the canal studies made lead to the conclusion that the most economical and advantageous location will be for a canal heading at the Whalen Dam and carried on a light grade, in order to take in as much land as possible, at the same time avoiding the rough country to be traversed by the Goshen Hole project.

In the report sent by the President to Congress on January 5, 1911, (H.R. Doc. 1262, 61st Congress, Third Session), the situation is described on pages 81 to 87. On the latter page in paragraph 7 it is stated: "The Fort Laramie Unit should be undertaken but the remainder of the Goshen Park Unit should not be commenced at present".

At the time said report was prepared the recent surveys had not been completed and it is found that these do not bear out the assumptions made but the conclusions are believed to be applicable to the present conditions.

A board of Engineers, consisting of Chief Engineer Davis, Consulting Engineer Henny, Supervising Engineer Walter, and Project Engineer Weiss, has taken up and considered all of the recent surveys and has recommended that construction be authorized upon the Fort Laramie Unit to cover approximately 107,000 acres at a total estimated cost of about \$6,500,000, or a little over \$60 per acre, provided that 95% of the owners of private lands, which include about one-half the area, pledge their holdings for the repayment of the proportionate cost of the project.

In the report of January 5, 1911, above referred to, allotments for the years 1911 to 1914 were made for the North Platte project aggregating \$4,185,000, this being based on the assumption that the Fort Laramie unit will include 60,000 acres at not to exceed \$3,000,000. The recent study of the various alternatives has resulted in the recommendation which practically doubles the probable investment and acreage, but the amount recommended for expenditure, 1911 to 1914, will be adequate to start the work with the understanding that the necessary funds for completion must be provided after 1914.

After a study of the reports of the engineers, the following recommendations are made:

RECOMMENDATIONS

1st. That the Fort Laramie Unit of the North Platte Project be now definitely undertaken.

2nd. That no construction work be begun until at least 95% of the private holdings have been properly pledged for the repayment of the proportional cost of the project.

3rd. That instead of the usual organization of water users, some form of trust deed be used similar to that adopted for the Umatilla project, Oregon, which will secure a lien on the lands and require the sale of holdings in excess of 160 acres.

Very respectfully,

(Signed) F. H. NEWELL,
Director.

August 16, 1912.

Recommendations approved.

(Signed) SAMUEL ADAMS,
First Assistant Secretary.

GUERNSEY DAM

BUREAU OF RECLAMATION,
Washington, April 29, 1925.

THE SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: The act of December 5, 1924 (Public No. 292, 68th Congress) contains the following appropriation:

North Platte Irrigation Project, Nebraska and Wyoming: For continued investigations, commencement of construction of the Guernsey Reservoir and incidental operations, \$800,000.

The Act contains the following proviso:

Provided, That no part of the sums herein appropriated shall be used for the commencement of construction work on any reclamation project which has not been recommended by the Commissioner of Reclamation and the Secretary of the Interior and approved by the President as to its agricultural and engineering feasibility and the reasonableness of its estimated construction cost.

The estimated cost of the dam in round numbers is \$1,780,000. The estimated cost of a 2,500 kilowatt power development at the dam is \$325,000. To the foregoing must be added (a) \$121,000, most of which has been already expended in connection with surveys and investigations, the purchase of flooded lands and road construction, and (b) \$290,000 needed in connection with a subsidiary power plant at Lingle, Nebraska, and transmission lines connected therewith. The total estimated cost of the dam and power development therefore aggregates \$2,516,000.

To recoup this expenditure the Government may look to the following sources: (a) the Interstate Division of the North Platte project. The landowners on this division have agreed in the manner provided by the Act of Congress of August 13, 1914 (38 Stat., 686) to an increase of the construction charge against their land of \$16 an acre, a part of which it is provided may be utilized for the building of the Guernsey Reservoir, including a 2,500 kilowatt power development. From this source it is estimated that a return of \$966,000 will be available for the Guernsey Reservoir and power development; (b) the Northport Division of the North Platte project, from which, under contract with the United States, a total of \$134,000 is to be paid for the Guernsey Reservoir and power development; and (c) the Fort Laramie Division of the North Platte project, on which construction charges have not yet been announced, but these charges when announced will include a rate per acre which in addition to other amounts will produce a return of \$885,000 applicable to the cost of the Guernsey Reservoir and power development. These figures aggregate \$1,985,000.

The above amounts are to be returned from the North Platte

project which has been under development for a number of years. From existing knowledge of the agricultural conditions on the project, I believe the water users on the Interstate, Northport, and Fort Laramie divisions will be able to pay within the period allowed by the Reclamation law, their construction charges, including items in the amounts stated above, for the Guernsey Dam and power development.

It will be noted that the anticipated returns from the Interstate, Northport, and Fort Laramie divisions of the North Platte project fall short by approximately half a million dollars of producing sufficient returns to repay the entire estimated cost of the development. The remainder, however, will be obtained from the net revenue which will be derived from the sale of power which has been and will be developed at the Guernsey Reservoir. The act of March 3, 1925 (Public No. 580, 68th Congress) provides, "That all net revenues from any power plant connected with the Guernsey Dam shall be applied to the repayment of the construction costs incurred by the Government on the project, until the obligations are fully paid." The contracts already made and pending insure a net return of about \$40,000 per annum, which will pay off the remainder of the construction cost of approximately \$500,000, in less than fifteen years. There is also a possible increase in revenue from the sale of additional water for irrigation, as the reservoir will have a capacity considerably in excess of the requirements of the areas hitherto named, which will contribute to the repayment of these costs, and the sale of this surplus water to other lands would expedite the payment of construction costs.

The Bureau has investigated, in a preliminary way, several prospective projects in Wyoming and Nebraska to which the surplus water in the reservoir could be sold, but the investigations have not been carried to a point where positive forecasts can be made regarding such sales. This, however, is not necessary.

I therefore recommend that the construction of the Guernsey Reservoir and power plant be authorized.

Respectfully,

(Signed) ELWOOD MEAD,
Commissioner.

APRIL 29, 1925.

Finding and recommendation concurred in and matter referred to the President with recommendation that he approve the Guernsey Reservoir and power plant as to their agricultural and engineering feasibility, and as to the reasonableness of their estimated construction cost.

(Signed) HUBERT WORK,
Secretary of the Interior.

Recommendation approved April 30, 1925.

(Signed) CALVIN COOLIDGE,
President.

OCHOCO PROJECT

OREGON

The Ochoco Irrigation District constructed the Ochoco dam, completing it in 1920. Funds were provided by the 80th Congress in the Interior Department Appropriation Act of 1949 (act of June 29, 1948, 62 Stat. 112) to commence rehabilitation of the dam. Originally considered a division of the Deschutes project, it has been established as the Ochoco project.

Additional funds were provided by the Interior Department Appropriation Act, 1950 (Act of October 12, 1949, 63 Stat. 765, Public Law 350, 81st Cong., 1st sess.).

PROVISIONS OF INTERIOR DEPARTMENT APPROPRIATION ACTS, 1949 AND 1950

[Extract from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1949, and for other purposes. (Act of June 29, 1948, 62 Stat. 1112, 1126, 1127, Public Law 841, 80th Cong., 2d sess.)

* * * That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, for the Department of the Interior for the fiscal year ending June 30, 1949, namely:

* * * * *

Construction: For construction and continuation of construction of the following projects in not to exceed the following amounts, all to be reimbursable (except as otherwise provided by law) under the reclamation law, to remain available until expended for carrying out projects (including the construction of transmission lines) previously or herein authorized by Congress:

Deschutes project, Oregon, \$580,000, of which \$350,000 shall be available toward emergency reconstruction of Ochoco Dam subject to allocations under section 7 of the Reclamation Project Act of 1939, and repayment of reimbursable amounts under terms satisfactory to the water users and the Bureau of Reclamation;

* * * * *

[Extract from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1950, and for other purposes. (Act of October 12, 1949, 63 Stat. 765, 780, Public Law 350, 81st Cong., 1st sess.)

* * * * *

Deschutes project, Oregon, * * * not to exceed \$1,063,750 shall be available toward emergency reconstruction of Ochoco Dam subject to allocations under section 7 of the Reclamation Project Act of 1939, and repayment of reimbursable amounts under terms satisfactory to the water users and the Bureau of Reclamation,
* * *

OGDEN RIVER PROJECT

UTAH

The Ogden River project ¹ was found feasible by the Secretary on November 13, 1935, and approved by the President on November 16, 1935, pursuant to section 4 of the act of June 25, 1910 (36 Stat. 836) and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702).

OFFICE OF THE SECRETARY,
Washington, November 13, 1935.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The Supreme Court of the United States in the Parker Dam decision (*United States v. State of Arizona*), 295 U. S. 174, indicated that Section 4 of the Act of June 25, 1910 (36 Stat. 835) is applicable to irrigation projects constructed under the National Industrial Recovery Act, and this report upon the Ogden River Project, Utah, is made to you under said statute of 1910 and under sub-section B of Section 4 of the Act of December 5, 1924 (43 Stat. 701).

Section 4 of the Act of June 25, 1910, provides, in effect, that after the date of that act no irrigation project to be constructed under the act of June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Sub-section B, Section 4, Act of December 5, 1924 (43 Stat. 701) provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information

¹ The *Ogden River Project* was initiated under the provisions of the National Industrial Recovery Act of 1933.

in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

Under date of August 24, 1933, I approved an allotment of \$3,000,000 from the appropriation made available pursuant to Title II of the National Industrial Recovery Act of June 16, 1933 (48 Stat. 195) and under date of August 3, 1935, you approved an allocation of \$500,000 from the Emergency Relief Appropriation Act of 1935 for the construction of the Ogden River Project, all of which is still available or has been expended toward the construction of the project.

The water to be developed by the project will be used for the purpose of furnishing a supplemental supply of water for approximately 16,000 acres of irrigated land and furnishing a full irrigation supply for about 4,500 acres of new lands situated in the vicinity of Ogden, North Ogden, Willard, Perry and Brigham City, Utah, and in addition furnish about 10,000 acre feet of storage water annually to Ogden City for municipal purposes. About 14,900 acres of the land to be supplied with water are situated under old existing irrigation and canal companies and about 3,550 acres are included in the Weber-Box Elder Conservation District and about 2,050 acres in the South Ogden Conservation District, both of which districts were formed for the purpose of participating in the project, and which two districts together with the old canal companies formed the Ogden River Water Users' Association which has entered into a contract with the United States dated May 31, 1934, to repay the cost of the project.

The furnishing of water for the project lands will be accomplished by the construction of the Pine View Reservoir on the Ogden River with a storage capacity of 41,000 acre feet of water, the construction of the Ogden-Brigham Canal which diverts water from the reservoir through and by means of the reconstruction and enlargement of the Utah Power & Light Company's pipe line to serve the needs of both the project and the power company and which canal from the end of the pipe line is approximately 23 miles in length, and the construction of the South Ogden Highline Canal which diverts at the end of the reconstructed and enlarged pipe line and extends for a distance of approximately 8 miles. Said Ogden-Brigham Canal has a capacity of 120 second feet and the South Ogden Highline Canal a capacity of 35 second feet. In addition to the reservoir, pipe line and two canals above mentioned it is necessary to reconstruct highways, and to reconstruct that portion of Ogden City's pipe line system which lies within the reservoir site and to do other incidental work.

Studies and investigations made by the Bureau of Reclamation indicate that the water supply is adequate for the purpose intended, that the construction of the reservoir, canals and other works is feasible from an engineering standpoint, and that the

project can be completed at a cost of \$3,500,000, which is \$600,000 in excess of the \$2,900,000 which the Association has agreed to pay. A supplemental contract to cover the repayment of the additional amount of \$600,000 will be required if the project is to be completed by the United States.

I find that the project is feasible, that the lands watered thereby are adaptable for actual settlement and farm homes, that the lands are in need of a water supply, and that the project will probably return the cost thereof to the United States. In this connection it is desired to mention that the lands which will be supplied with water are highly developed, well colonized, and in relatively small ownerships. There is little danger under the circumstances of an inflationary upward movement in land values bringing in new settlers buying on time at high prices to the ultimate detriment of the project.

I recommend that the project, now in process of construction, consisting of the Pine View Dam, pipe line, two canals, highways, and other works, be approved, that any steps or action heretofore taken toward the construction of the same be ratified, and that authority be given to this Department to proceed with the work and to make contracts and take any necessary action to construct and complete the project.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved November 16, 1935.

(Signed) FRANKLIN D. ROOSEVELT,
President.

OKANOGAN PROJECT

WASHINGTON

The Okanogan project was authorized by the Secretary on December 2, 1905, under the Reclamation Act of 1902; examined and reported upon by a Board of Army Engineers and approved by the President on January 5, 1911, pursuant to the act of June 25, 1910 (36 Stat. 835).

UNITED STATES GEOLOGICAL SURVEY,
RECLAMATION SERVICE,
Wenatchee, Washington, April 27, 1905.

F. H. NEWELL, Esq.,
Chief Engineer, Reclamation Service, Washington, D. C.

DEAR SIR: The undersigned board of engineers have examined the Okanogan Project on the ground and the plans and estimates submitted thereon by Mr. T. A. Noble, and have to report as follows:

Water Supply. Observations of stream flow of Salmon Creek have covered a period of only two years, which indicate a discharge of 51,000 and 31,000 acre feet respectively. As neither of these years is likely to be an absolute minimum we are of the opinion that the utmost limit of irrigable area from this water supply when fully conserved is 10,000 acres. For this purpose a storage capacity of 10,000 acre feet is necessary. The area already irrigated is estimated at 1,500 acres and has at present an adequate water supply and therefore would not be likely to contribute to any new development. The cost of the project must therefore be borne by 8,500 acres.

Estimated Cost:

Salmon Lake Reservoir, capacity 4,300 acre-feet.....	\$12,000
Conconully Reservoir, capacity 7,900 acre-feet.....	91,200
Tunnel and Canal to Brown Lake (Pogue Route) capacity 80 second-feet.....	81,700
Brown Lake Reservoir, capacity 7,000 acre-feet.....	46,250
Distribution System, 8,500 acres at \$8.00.....	68,000
Total	299,150
Engineering and Contingencies, 20 per cent.....	59,850
Total	359,000
Maintenance 10 years, 8,500 acres at \$10.00.....	85,000
Total	444,000
Cost per acre \$52.25.	

Value of Land. In view of the high cost we have made careful inquiry into the probable value of these lands under irrigation. The limited area of the tract and its location in the heart of an extensive range country, which would be dependent upon it for winter feed insure a profitable and permanent market for forage which we believe would return a profit upon a valuation of \$100 per acre. In addition to the above the lands appear to be well adapted to the production of deciduous fruits and nuts and for this purpose the land would yield much larger returns. Lands near Wenatchee of similar character with adequate water supply are worth from \$150. to \$200. per acre, and water rights are being sold at from \$50. to \$80. per acre with an additional charge for maintenance of from \$1.25 to \$1.50 per acre per year.

In view of the above facts we are of the opinion that the lands would be ample security for \$60. per acre. This opinion seems to be concurred in unanimously by the present holders of land under the project, who are very anxious to guarantee the return of the cost on the above basis.

Recommendations. First. We recommend that the observations of water supply be continued and the district engineer be instructed to push investigations to the point where a closer estimate of cost can be made and if this should not materially exceed the present estimate, and provided that suitable arrangements for water rights and rights of way can be concluded, and that the owners of irrigable lands comply with the required terms, that the project be constructed.

Second. That upon construction being authorized the farm units on public land be fixed so as to provide not less than 40 nor more than 80 acres of irrigable land for each; and that private owners be limited to the purchase of water for 80 acres of land.

Respectfully submitted.

(Signed) A. P. DAVIS,
Assistant Chief Engineer.
A. J. WILEY,
Consulting Engineer.
D. C. HENNY,
Consulting Engineer.
T. A. NOBLE,
District Engineer.

UNITED STATES GEOLOGICAL SURVEY,
RECLAMATION SERVICE,
Brewster, Washington, October 9, 1905.

CHIEF ENGINEER,
United States Reclamation Service, Washington, D. C.

SIR: The undersigned Board of Engineers, designated to report on the Okanogan Project has examined the principal features involved, has studied plans and estimates prepared by Mr. C. Andersen and has conferred with the people interested in the project.

We find that the total area irrigable from Salmon River is 10,000 acres, of which there are now being irrigated 1,350 acres, the vested water rights whereof have been defined by preliminary mutual agreement.

We estimate that the cost of irrigating the remaining 8,650 acres will not exceed 50 dollars per acre, including ten years maintenance.

We find that the people are willing and anxious to accept the project on the basis of the cost estimated and to comply with all the usual requirements preliminary to construction and we believe that the land is ample security for the estimated cost of construction as stated above.

We therefore recommend:

First. That the sum of \$432,500 be set aside for the construction of this project.

Second. That the construction be commenced as soon as the following conditions have been complied with:

a. That formal agreements defining the water rights for at least 90% of the 1,350 acres now irrigated be duly executed and that in connection therewith the perpetual use of Salmon Lake reservoir be granted to the United States by its present owners.

b. That a Water Users Association be organized and that at least 90% of the 8,650 acres of the irrigable land be subscribed.

c. That contracts for the disposal of excess land be executed for at least 90% of the excess area.

Third. That the farm unit for the project be fixed at 40 acres of irrigable land.

Fourth. That in order that the work may be completed in time for the irrigation season of 1907 prompt action be taken for the authorization of this project.

BOARD OF ENGINEERS,
(Signed) A. J. WILEY,
Consulting Engineer.
MORRIS BIEN,
Supervising Engineer.
D. C. HENNY,
Supervising Engineer.
PROJECT ENGINEER,
(Signed) CHRISTIAN ANDERSEN,
Engineer.

UNITED STATES GEOLOGICAL SURVEY,
October 18, 1905.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: I have the honor to transmit herewith copy of report of a board of engineers, dated October 9, on the Okanogan project in the State of Washington.

This project is designed to reclaim 8,650 acres, at an estimated cost of not to exceed \$50 per acre. The board has recommended that the sum of \$432,300 be set aside for the construction of this project. In order that the amount may be stated in round numbers, I suggest that the tentative allotment be put at \$500,000, or as much thereof as may be needed.

In my letter of October 14, on page 4, it is stated that it is proposed to recommend the allotment of the estimated balance of over \$9,000,000. Of this amount, \$2,500,000 has been considered for the State of Washington, the principal part of which may be needed for the Yakima Valley project. This latter project is not yet in a position where definite recommendations can be made. I therefore suggest that \$500,000 be set aside, as above stated, for the Okanogan project and the remainder be considered in the future for the Yakima Valley project, should this be brought to a definite conclusion.

I also respectfully request that the recommendations of the board of engineers be approved, and that suitable authority be given to push the work to the point of letting contracts at the earliest practicable date.

Very respectfully,

(Signed) CHAS. D. WALCOTT,
Director.

OFFICE OF THE SECRETARY,
Washington, December 2, 1905.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: On October 18, 1905, you submitted for my consideration the report of the Board of Engineers dated October 9 on the Okanogan Reclamation Project in Washington. The Board of Engineers made the following recommendations:

First, that the sum of \$432,300 be set aside for the construction of this project.

Second. That the construction be commenced as soon as the following conditions have been complied with:

a. That formal agreements defining the water rights for at least 90% of the 1,350 acres now irrigated be duly executed and that in connection therewith the perpetual use of Salmon Lake reservoir be granted to the United States by its present owners.

b. That a Water Users' Association be organized and that at least 90% of the 8,650 acres of the irrigable land be subscribed.

c. That contracts for the disposal of excess land be executed for at least 90% of the excess area.

Third, That the farm unit for the project be fixed at 40 acres of irrigable land.

Fourth, That in order that the work may be completed in time for the irrigation season of 1907 prompt action be taken for the authorization of this project.

You recommended that these recommendations of the Board of Engineers be approved; that \$500,000 be set aside for the construction of said project, and that suitable authority be given to push the work to the point of letting contracts at the earliest practicable date.

On November 8, 1905, you were advised that your recommendations were not approved, and on November 15th you were further advised that the purpose of the Department in taking the action of November 8 was "simply to suspend action on your recommendation pending further investigation and consideration of said project."

The further investigation and consideration mentioned have now been had and in view thereof, and as the result of a conference this morning with the entire Congressional delegation from the State of Washington at which information was submitted to the Department in relation to this project of which it has never heretofore been apprised, the report and recommendations of the Board of Engineers in reference to said project dated October 9, 1905, are hereby approved. \$500,000 or so much thereof as may be necessary, is hereby set aside from the reclamation fund for the construction of said project and authority is hereby given to push the work to the point of letting contracts at the earliest practicable date.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

ORLAND PROJECT

CALIFORNIA

The Orland project was authorized by the Secretary on October 5, 1907, under the Reclamation Act of 1902; examined and reported upon by a Board of Army Engineers and approved by the President on January 5, 1911, pursuant to the act of June 25, 1910 (36 Stat. 835).

UNITED STATES GEOLOGICAL SURVEY,
RECLAMATION SERVICE,
Portland, Oregon, November 12, 1906.

CHIEF ENGINEER,
Washington, D. C.

DEAR SIR: In accordance with your instructions the preliminary investigations instituted in connection with the Orland Unit of the Sacramento Project have been reviewed by a board of engineers consisting of D. C. Henny, E. G. Hopson and S. G. Bennett. This board held its sessions in Portland, Oregon, November 11 and 12, 1906, and has the honor to report as follows:

There are about 2 million acres of land in the Valley that is likely to be suitable for irrigation. The run-off of the Sacramento River is sufficient to supply three times the amount of water that might be required for the irrigation of the entire Valley.

The natural unregulated flow of the Sacramento River system is such that three-fourths of the entire run-off is discharged during the winter and early spring months. The remaining one-fourth, which flows down during the irrigation season, reaches a minimum during the midsummer months when irrigation demands a maximum supply.

While the natural flow, therefore, would permit of the full irrigation of but a relatively small portion of the Sacramento Valley, it is nevertheless very important, as may be noted from the following schedule:

MINIMUM DISCHARGES OF THE SACRAMENTO, FEATHER AND YUBA RIVERS

	<i>Second-feet</i>
Sacramento River at Red Bluff.....	3,600
Feather River above mouth of Yuba.....	1,100
Yuba River at its mouth.....	400

Disregarding streams farther to the South, the above minimum flow would be sufficient to irrigate five hundred thousand acres of land in the Valley.

The lower reaches of the stream, however, remain navigable even during low water flow, and the diversion of large quantities of water at such times would cause interference with navigation. Large irrigation development must therefore depend upon storing of flood waters, and a study was commenced by the Reclamation Service of available storage reservoirs supplementary to previous investigations by the Hydrographic Branch of the Geological Survey.

Numerous possibilities exist as indicated in the report of Mr. S. G. Bennett dated June 30, 1906, and it was found that a commencement with irrigation might be made at almost any desired point in the Valley so far as water supply is concerned.

The selection of a first unit was largely influenced by two important facts:

First, that in accordance with your instructions a first unit should be self-contained and its estimated cost should be well below one million dollars.

Second, that the land in the Valley has been devoted to wheat raising; that it is held in large areas by single owners; that the gradual exhaustion of the soil for wheat raising purposes has tended to enlarge the average holding and cause absent landlordism, and that the land owners not only do not appreciate irrigation possibilities but generally oppose a forced subdivision such as must be an essential condition attached to any reclamation project.

The latter consideration led to investigating the feasibility of a project for the irrigation of lands in the vicinity of Orland in Glenn County, where landowners had voluntarily formed a water users' association, where large bodies of land had been subscribed and where consequently the best prospect existed of successfully solving this phase of the situation.

The land in the vicinity of Orland can be watered from Stony Creek, one of the tributaries of the Sacramento River entering from the west. The small low water flow of this stream had been appropriated, and irrigation must therefore be dependent upon storage.

There are four feasible storage reservoir sites on this creek, as follows:

	<i>Acre-feet</i>
1. East Park	35,000
2. Briscoe	15,000
3. Mill Site	44,000
4. Stony Ford	45,000

The first three were reported and estimated on by Mr. Burt Cole in 1903. The East Park reservoir was found by him to be relatively the cheapest, and recent investigations therefore were started at this point, and bed rock was located at reasonable

depth. The fourth site was located during recent investigations and is second in order of probable cost per acre foot stored.

A study of available hydrographic data shows that each of the above reservoirs would be filled each year with the exception of those of extreme low rainfall, of which there has been only one during the last twenty years that records are available. During such low year the two most economical reservoirs considered, namely, the East Park and the Stony Ford reservoirs, would probably fill to the extent of 75% or more.

The land that can be most economically irrigated from the water stored in these reservoirs lies on both sides of Stony Creek below the point where it emerges upon the valley proper, about five miles above Orland. This land was investigated by Mr. W. H. Heileman, Soil Expert of the Reclamation Service, who reports that it is uniformly capable of producing all varieties of crops, including citrus fruits as grown in the San Joaquin and Sacramento Valleys and in Southern California.

A very small amount of this land is now under irrigation and is supplied by means of two canal systems, one owned by the Stony Creek Irrigation Company, whose canal lies to the south of Stony Creek, and by the Lemon Home Power and Light Company, irrigating lands to the north side. The latter company has been in operation about nine years and the former for double that time. The present irrigation is confined to about 400 acres on the south side and 40 acres on the north side. The small extent of irrigation after such a long time of operation may be explained by the extremely small summer flow of Stony Creek, thereby not permitting full irrigation except for a small area of land. Where full irrigation has been practiced the opinion expressed by Mr. Heileman is in every way confirmed.

The above two canal companies occupy with their canals strategic rights of way and have early water rights which will render it necessary to arrive at a distinct understanding with them either through agreement or more probably through purchase. In the estimates upon which the subsequent portion of this report is based certain valuations have been assumed contemplating the purchase of these canal properties.

There are small amounts of lands irrigated along Stony Creek in the narrow valley on the upper reaches of the stream. It is not expected that serious misunderstanding or litigation can result from conflict in regard to the use of water.

A flood irrigation appropriation has been made by the owners of the Central Irrigation Canal which crosses Stony Creek about nine miles below Orland. No serious complication is feared from this source, the total amount of acres irrigated with Stony Creek flood waters having been confined so far to about 400, and during the time that Stony Creek is in flood the Sacramento River, from which the Central Irrigation Company's canal is intended to derive its supply, is also in flood and would give ample water supply.

It has not been deemed advisable that investigation, the results of which must largely depend upon action of landowners, should

be carried to a great degree of refinement until after a conditional allotment is available. This board is, however, of the opinion that the data at hand justify the following conclusions:

That the East Park reservoir in connection with the spring flow from Stony Creek will be sufficient for the irrigation of 11,000 acres.

That if instead of the East Park reservoir the Stony Ford reservoir be built there will be a sufficient supply for 14,000 acres.

That the most economical selection of lands upon which to use these waters would be in a solid body on the south side of Stony Creek.

That the general feeling among the people in the vicinity of Orland favors the irrigation of lands on both sides of Stony Creek.

That in view of private rights involved the canal properties may be purchased at a considerably reduced cost if some of the land on the north side of Stony Creek be included in the present unit.

That in any event from 1,000 to 3,000 acres may be added to the project by pumping from wells located at the lower edge of the lands to be irrigated, the supply for such wells to be obtained from underground water now existing in the gravel strata south of Stony Creek which will be added to through irrigation of the upper lands as herein proposed.

That the cost per acre, omitting lands to be irrigated by pumping, will lie between \$40.00 and \$50.00, with the probability that it will be close to \$42.00.

That such cost may be reduced by including as much land upon which to pump water from wells as subsequent experience may warrant.

That the climatic condition and the character of the soil indicate that the lands themselves will be abundant security for any possible cost of the project.

That it may be deemed advisable not to decide between the East Park and Stony Ford reservoirs until options on lands have been obtained in both.

That the maximum area of the project be considered as 14,000 acres covered by gravity and 3,000 acres covered by pumping, total 17,000 acres.

That this maximum would be reduced to 11,000 acres by gravity and 3,000 by pumping in case the East Park reservoir be selected, and

That the construction cost on the basis of maximum area may be estimated at \$650,000.

In view of the above we therefore recommend:

That the Orland Unit of the Sacramento Valley Project be approved and \$650,000 be now set aside for its construction, but that no money be made available for construction until after the following conditions shall have been complied with:

1. That a percentage of land, satisfactory to the Department, lying economically under the project shall have been pledged.

2. That satisfactory agreements for adjustment of water rights or for purchase shall have been concluded with the Stony Creek

Irrigation Company and the Lemon Home Water and Light Company, and

3. That satisfactory options for the majority of lands shall have been obtained either in the East Park or the Stony Ford reservoirs.

Yours very respectfully,

(Signed) D. C. HENNY,
E. G. HOPSON,
S. G. BENNETT,
Board of Engineers.

DEPARTMENT OF THE INTERIOR,
Washington, December 18, 1906.

THE DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: Referring to your letter of December 17, 1906, subject, Orland project, California, or, the first unit of the Sacramento Valley project, California, you are advised that concurring in your recommendation, \$650,000 is hereby conditionally allotted from the Reclamation fund for the construction of said project, subject to the conditions specifically enumerated in your letter.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

UNITED STATES RECLAMATION SERVICE,
Klamath Falls, Oregon, August 5, 1907.

The DIRECTOR,
U. S. Reclamation Service.

DEAR SIR: A. P. Davis, M. Bien and D. C. Henny, appointed by you to report on the Orland Project, convened at Orland, California, on August 2nd and 3rd, and have the honor to report as follows:

On the 18th of December, 1906, the Secretary of the Interior allotted the sum of \$650,000 for the construction of the Orland Project, subject to four conditions.

We confined our work to an investigation of the extent to which these conditions have been complied with.

Condition No. 1: That 12,000 acres of land be pledged by the owners in a form to be approved by the Department such that the

lands will be held bound to repay the cost of construction under the terms of the Reclamation Act.

We find that land subscriptions aggregate in excess of the limit placed by the Secretary and that the subscribed lands lie in bodies north and south of Stony Creek, which, while not absolutely solid, are in the main continuous and permit of such selection as will render an economical distribution system practicable. We find it feasible to select from the lands now subscribed, bodies of 7,000 acres north of Stony Creek and 5,600 acres south of Stony Creek, all to be supplied exclusively by gravity canals; also, an additional body of 1,400 acres which can be advantageously supplied partly by gravity canals and partly by pumping underground water.

We find that Condition No. 1 has been complied with.

Condition No. 2: That satisfactory arrangements be made and agreements completed for the adjustment of water rights or for options to purchase certain properties and rights, notably those of the Stony Creek Irrigation Company and the Lemon Home Water and Light Company.

Verbal agreements have been reached for the purchase of all properties and rights belonging to the Stony Creek Irrigation Company and the Lemon Home Water Power & Light Company at satisfactory prices, to wit: \$25,000 and \$15,000 respectively. We find that the rights of way and water rights of the Lemon Home Canal are at present owned by individual stockholders of said Company, who are prepared to make transfer of the same to the Company.

The purchase of above properties will settle all disputes with present claimants to water from Stony Creek and its tributaries, with the exception of several small irrigators of lands in the narrow foothill valleys and of a broad claim to Stony Creek waters of the Central Canal and Irrigation Company. As regards the above mentioned small irrigators, it is believed to be unnecessary to enter into written agreements with them because the areas which it will be possible for them to irrigate are small, and it is believed that the appropriation made by the United States of Stony Creek waters, if followed by construction and beneficial use will be a sufficient protection. As regards the Central Canal & Irrigation Company, we deem it necessary that a definite contract be entered into limiting the relative rights of the said Company. A tentative agreement to this effect has accordingly been drawn up by us, which is to be laid before the said Company by a committee of the Water Users' trustees, which agreement has the preliminary approval of the attorney of the Central Canal & Irrigation Company.

We have also prepared agreements with the Stony Creek Irrigation Company and the Lemon Home Water Power and Light Company for the purchase of their respective properties, the latter to be executed after all rights of way and water rights now held by individual stockholders shall have been transferred to the Company.

We find that Condition No. 2 will have been complied with

after the Central Canal & Irrigation Company shall have executed a contract with the Government, such as has been submitted by us, and after the Stony Creek Irrigation Company and the Lemon Home Water Power & Light Company shall have signed agreements as drawn up by us, as above set forth.

Condition No. 3: That satisfactory arrangements be made for purchase of lands needed for reservoir purposes.

We find that satisfactory options have been obtained for the purchase of lands needed for reservoir purposes.

Condition No. 4: That the owners of the lands agree to subdivide their holdings in excess of 160 acres into farm units of not to exceed 40 acres.

We find that the owners of the land to be irrigated have agreed to subdivide their lands in excess of 160 acres into farm units of forty acres and that the above condition has been complied with.

From the above it will be noted that Conditions 1, 3 and 4 have now been satisfied, and we recommend that, as soon as the various agreements above mentioned with the Central Canal & Irrigation Company, the Stony Creek Irrigation Company and the Lemon Home Water Power & Light Company shall have been executed, all conditions imposed by the Secretary shall be deemed satisfied and that thereupon the Orland Project be definitely approved.

We deem it advisable that the land necessary for the diversion site at the head of the proposed Government canals be acquired prior to commencement of construction of the project and so recommend.

Respectfully submitted.

(Signed) A. P. DAVIS,
MORRIS BIEN,
D. C. HENNY,
Board of Engineers.

UNITED STATES RECLAMATION SERVICE,
Washington, October 5, 1907.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: On December 18, 1906, the Department concurred in the recommendation of the Director of the Geological Survey that \$650,000 be conditionally allotted from the Reclamation fund for the construction of the Orland project, California, subject to the conditions specifically enumerated in the Director's letter of recommendation. These conditions are as follows:

1st. That 12,000 acres of land be pledged by the owners, in a form to be approved by the Department, such that the lands will be held bound to repay the cost of construction under the terms of the Reclamation Act.

2nd. That satisfactory arrangements be made and agreements

completed for the adjustment of water rights, or for options to purchase certain properties and rights, notably those of the Stony Creek Irrigation Company, and of the Lemon Home Water and Light Co.

3rd. That satisfactory arrangements be made for the purchase of lands needed for reservoir purposes.

4th. That the owners of the lands agree to subdivide and sell their holdings in excess of 160 acres, in farm units of not to exceed 40 acres.

These conditions have all been met in a satisfactory manner:

1st. 12,000 acres have been pledged to the Water Users' Association organized under the project.

2nd. Contracts have been executed for the purchase of the irrigation system of the Stony Creek Irrigation Company and of the Lemon Home Water and Light Company, which are now on the way to Washington for your approval. A contract has also been executed by the Central Canal and Irrigation Company, which diverts water from Stony Creek below the project. The purpose of this contract is to adjust between the United States and this company their respective claims to the waters of Stony Creek.

3rd. Satisfactory arrangements have been made for the purchase of the lands needed for reservoir purposes.

4th. The owners of the unit now to be developed have agreed to subdivide and sell their holdings in excess of 160 acres in farm units not to exceed 40 acres.

Inasmuch as some of the options taken to meet the conditions of land ownership will expire on the 15th of this month, it is important that the approval of the project be given as soon as practicable, in order that the parties holding these options may exercise them.

The contracts with the companies mentioned have been carefully examined by the officers of the Reclamation Service and are in proper form to protect the interests of the Government.

In order that there may be no further delay, and as any minor adjustments which may be necessary in connection with these contracts will not be material, I recommend that the allotment of \$650,000 be made definite, the conditions having been fulfilled, and that the project be approved for construction.

Very respectfully,

(Signed) A. P. DAVIS,
Acting Director.

Action taken as recommended October 5, 1907.

(Signed) JAMES RUDOLPH GARFIELD,
Secretary.

OWYHEE PROJECT

OREGON-IDAHO

The Owyhee project¹ was found feasible by the Secretary on October 9, 1926, and approved by the President on October 12, 1926, under the provisions of section 4 of the act of June 25, 1910 (36 Stat. 836) and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702).

OFFICE OF THE SECRETARY,
Washington, October 9, 1926.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: Section 4 of the Act of June 25, 1910 (36 Stat., 835) provides in effect that after the date of that act no irrigation project to be constructed under the act of June 17, 1902 (32 Stat., 388) and acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924 (43 Stat., 701), provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

The various features requiring investigation and report under Subsection B, Section 4, Act of December 5, 1924, *supra*, will be discussed in the order in which presented in that subsection, as follows:

WATER SUPPLY

Source.—Owyhee River. Has a mean annual flow of 1,004,000 acre-feet, the maximum yearly flow being 2,300,000 acre-feet and minimum 350,000 acre-feet. Small summer flow fully used by

¹ See also Board of Engineers report of October 27, 1905, for Owyhee, Malheur, and Umatilla projects, p. 891.

Owyhee Ditch which requires supplemental water. Future depletion by upstream developments amounting to 30,000 acre-feet annually allowed for. Project requirements 636,000 acre-feet annually, including Owyhee Ditch lands.

Shortages in period of 21 years, 54% 1924, 16% 1915, 11% 1905.

The shortages referred to above are based on the assumption that the maximum acreage will be irrigated, and may be eliminated by decrease of acreage. If there is no increase of acreage, it would be possible to increase the water supply by raising the height of the dam a few feet and increasing the carry-over capacity, which could be done at slightly greater expense.

Storage capacity.—Dead storage for diversion elevation 406,-000 acre-feet; live storage 595,000 acre-feet at Hole-in-Ground Reservoir Site.

ENGINEERING FEATURES

Storage-Diversion dam.—Concrete arch, 355' high above foundation, 600' long on top, 405,000 cubic yards concrete, channel spillway with 30,000 second-feet capacity.

Main canals.—Outlet from reservoir is 15' diameter, tunnel 3½ miles long to division works. Succor Creek branch to supply Gem District and adjacent lands has tunnel 4½ miles long, 10.2' diameter followed by 60 miles of canal principally in earth. From division works the main canal continues 4 miles including 1,500 feet of tunnel, 8,000 feet of concrete flume and a 900 foot steel siphon 114" in diameter. From the end of the main canal, Mitchell Butte Canal with maximum capacity of 1,203 second-feet crosses Owyhee River with siphon 9' diameter 1,730 feet long and continues 60 miles northerly largely in earth to Malheur River. From end of Mitchell Butte Canal, Dead Ox Flat Canal crosses Malheur River with 8' diameter steel siphon, 2½ miles long, capacity 445 second-feet, thence northerly 35 miles in earth canal to the end opposite the town of Weiser, Idaho.

Drainage.—A total of \$993,000 is included in the construction estimate for drainage in all divisions.

COST OF CONSTRUCTION

Cost by Features

Storage and diversion	\$6,111,815
Main canals	9,506,785
Laterals	1,103,400
Drainage	993,000
Total	17,715,000

TOTAL COST

As shown above, the total cost of \$17,715,000 is for actual construction only, and does not include items for "Operation and Maintenance during construction," "Land Surveys," and "Investi-

gations." An allowance of \$285,000 has been made to cover the cost of the above items, bringing the gross cost to \$18,000,000.

LAND PRICES AND PROBABLE COST OF DEVELOPMENT

The Owyhee project comprises about 124,000 acres of irrigable land in the States of Idaho and Oregon. Of this about 70,000 acres are new land covered with sagebrush and other desert plants, but are not farmed because of the low rainfall. Some 41,000 acres are in districts irrigated from the Snake River by means of pumps and 13,000 acres are under the Owyhee Ditch, which has an insufficient water supply. Fifty-four thousand acres, or more than one-third of the land in the project is therefore settled, improved and is now being irrigated.

The unsettled, unimproved, excess lands of this project have been appraised by a competent board which has fixed an average selling price of \$7.42 an acre for all lands of the project and an average of \$10.20 an acre for the irrigable portion thereof. The contracts with the districts and individual landowners require that these prices be adhered to in selling excess land to new settlers. Settlers who are allotted public land will be required to have some capital and farming experience. Application of these principles in settling this project will tend to eliminate some of the obstacles to farm development of the past.

FINDING REGARDING FEASIBILITY OF PROJECT

The foregoing data justify the conclusion that the project is feasible from an engineering and economic standpoint, and I accordingly so find and declare.

ADAPTABILITY OF LAND TO SETTLEMENT AND FARM HOMES

The land embraced in the project is of more than average fertility. Rough land and poor soil have been eliminated. The retained land can be prepared for the effective application of water. If properly prepared for irrigation and properly cultivated, good yields of all crops grown in this locality are assured. With care in the selection of settlers, with farms suitably improved and equipped, success in farming may be anticipated.

PROBABLE RETURN TO RECLAMATION FUND OF COST OF CONSTRUCTION

The next declaration required is that the cost of construction will probably be returned to the reclamation fund. This is interpreted to mean that it will be returned within the period fixed in the contract with the Owyhee district, which is in forty years from the time the public notice, that the works are completed, is issued by the Secretary. The works can be completed in five years from June 30, 1927, if Congress will appropriate the necessary

money. If completed in 1932, public notice could be issued which would require payments to begin in 1933, and this would give irrigators until 1973 to complete their payments.

The construction costs of this project will vary with the classification of the land, but the average will probably be about \$160 an acre, making the average yearly payment \$4 an acre. To this will have to be added the expense of operation and maintenance, and the question which we have to consider is, can irrigators meet this operation cost and an annual construction payment, varying between \$3 and \$6 an acre, depending on the class in which a particular farm is placed?

While this is a higher construction payment than has been made on older projects like Boise, Minidoka, Strawberry Valley and North Platte, where conditions of soil and climate approximate those at Owyhee, the total yearly charge will be considerably less than is now being paid by irrigators under the pumping units of this project or on many other private projects. It is believed, therefore, that improvements in methods of development and in agricultural practices which may be expected will increase incomes and ability to meet the required payments on the Owyhee project.

The unwise and immensely injurious effect of land speculation on older projects will be forestalled at Owyhee by the appraisal made of the surplus land and fixing in advance the price settlers are to pay. Provision for giving settlers practical advice for working out crop programs and for the selection of settlers on the public land of the project, all of which are now authorized by law, will help hasten farm development and increase the earnings of farmers.

Settlers on this project will begin the development of farms under the following favorable conditions: Increase in agricultural production in the Nation is not keeping pace with increase in population. They will realize at the outset that their farms must be intensively cultivated and will be helped to organize for cooperation in production and marketing.

The favorable conditions heretofore recited and the newly established policy of the Bureau justify the belief that this project will return the cost thereof.

Because of the urgent need for a larger and cheaper water supply by the settlers on 54,000 acres of this area, because the unimproved land is fertile, suited to the needs of settlers and appropriate for development under the reclamation law, and because the development of this area is destined to greatly benefit the Nation, I recommend its approval and the issuance of the necessary authority to this Department to make contracts for its construction, and to proceed with the work.

Very truly yours,

(Signed) HUBERT WORK,
Secretary.

Approved October 12, 1926.

(Signed) CALVIN COOLIDGE,
President.

MANN CREEK PROJECT

The Mann Creek project, just north of Owyhee project, was authorized by the Secretary on March 10, 1941, approved by the President July 7, 1941, under the terms of the Water Conservation and Utilization Act of August 11, 1939, as amended. Construction has never begun because the water users, in an election, failed to support the project.

THE SECRETARY OF THE INTERIOR,
Washington, March 10, 1941.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: An investigation has been made of the Mann Creek irrigation project in Washington County, Idaho; and pursuant to the authority of the act of August 11, 1939 (53 Stat. 1418), as amended by the act approved October 14, 1940 (Public No. 848, 76th Congress, 3d Session), I submit this report on the proposed project, and request your approval of the findings and certifications contained herein.

PROJECT PURPOSE AND PLAN

The purpose of the project is to provide a regulated water supply for lands which have been farmed for many years, but which suffer losses from drought on account of the unregulated supply of water. The principal engineering feature as now proposed, subject to such change as the final surveys may indicate, is a storage reservoir on Mann Creek at a site about 13 miles northeast of the town of Weiser, Idaho. The estimated height of the dam which will create the reservoir is 118 feet above foundation, and its crest length is approximately 1,000 feet. The estimated live storage capacity of the reservoir is 8,600 acre feet.

The project lands, comprising approximately 4,300 acres, extend along the valley for a distance of about 12 miles below the dam site. Irrigation of lands began as early as 1874, but because of the unregulated supply of water it has been practicable to raise only some grain and forage crops, although the soil and climate are adapted to the growth of many other varieties.

The project will contribute toward the solution of problems arising out of interstate movements of agricultural populations by providing farms for farm peoples who have been forced to leave other submarginal farm areas, and by stabilizing the farm economy of the farm areas comprising the unit. The project will also contribute toward the solution of the unemployment problem by providing considerable employment in its construction stages, and should contribute to the permanent solution of this problem in the vicinity of the unit by the stabilization of its agricultural economy.

PARTICIPATION OF FEDERAL AGENCIES

It is proposed that the Bureau of Reclamation will construct the dam, reservoir and appurtenant works. The present plan, subject to change, is that the Bureau also will operate the irrigation reservoir after it is built, and will negotiate contracts with the water users for the repayment of construction charges.

The Secretary of Agriculture has been consulted regarding participation in the proposed project by the Department of Agriculture, and a report to you by the Secretary of Agriculture on the participation of that Department is transmitted herewith. As shown in that report, the Department of Agriculture proposes to make a survey from which the extent of its prospective participation may be determined.

For the construction and development of the project, the Work Projects Administration and the Civilian Conservation Corps are expected to provide most of the labor, and a small amount of materials, supplies, and equipment. A letter from the Work Projects Administration is enclosed. It will be noted therefrom that approximately 300 certified workers can be made available from surrounding counties, but that this will require the establishment of a work camp. If construction is undertaken by such a small organization, the construction period would be of such length as to require excessive costs for overhead which would have to be borne through expenditures from the General Fund. In addition, it would be necessary to construct and operate camps for housing the workers and to provide transportation to and from the camps for the workers. It is estimated that these costs would increase the total amount required from the General Fund beyond the repayment ability of the water users. To employ CCC labor in conjunction with WPA in order to reduce the length of the construction period would necessitate the mingling of both groups, a procedure which is undesirable on a job of this size. It appears, then, that participation by the Work Projects Administration should be restricted largely to the employment of workers in the immediate vicinity of the dam. These could be employed on isolated items of work such as road and telephone line relocation, clearing the reservoir site, and construction of permanent headquarters. The remainder of the construction would be accomplished with CCC forces.

ESTIMATED COST AND FINANCING PROCEDURE

The total estimated cost of the project is \$1,005,000, of which \$1,000,000 is planned to be used for the construction of works by the Bureau of Reclamation, and \$5,000 for surveys by the Department of Agriculture. Funds amounting to \$430,000 for construction, and \$5,000 for surveys, totaling \$435,000, are expected to be allotted from appropriations made under authority of the act of August 11, 1939, and its amendments. The remaining \$570,000 of the total estimated cost is the amount of Federal funds which is expected to be expended by the Work Projects Administration and the Civilian Conservation Corps, and which will be made available to the project through surveys, labor, materials, or other property, including money, supplied by these agencies. A tabulation giving the breakdown of the estimated cost and the proposed financing procedure is attached.

The Interior Department Appropriation Act, 1941, contains an appropriation of \$3,500,000 which was made pursuant to the authority of the act of August 11, 1939. The estimated requirements for the Mann Creek project for the fiscal year 1941 are \$200,000 for construction by the Bureau of Reclamation, and \$5,000 for surveys by the Department of Agriculture. The amount needed by the Department of Agriculture cannot be transferred to it from said appropriation of \$3,500,000, according to a ruling of the Comptroller General. However, the Department of the Interior is ready to join the Department of Agriculture in a recommendation to the Congress that by appropriate action it make available to the Department of Agriculture, pursuant to Section 12 (2) of the Act of October 14, 1940, such part of the \$3,500,000 appropriation item as is deemed necessary to meet the requirements of the Department of Agriculture on this and similar projects in the fiscal year 1941.

SIZE OF FARM UNITS

Section 4 (c) (5) of the Act of October 14, 1940, provides that the Secretary of the Interior "shall establish the size of farm units of irrigable lands on each project in accordance with his findings of the area sufficient in size for the support of a family on the lands to be irrigated." Surveys of the irrigable area have been completed to a sufficient extent that I am able to determine that the maximum size of farm units for the project will be not more than 160 acres. The exact size of the farm units, which may vary somewhat over the project area in accordance with varying conditions of the project lands, will be established after more complete and final surveys have been made. The survey planned by the Department of Agriculture may include an investigation of the economic size of farm units. If this is done, any recommendations that Department may have to submit on this subject will be considered before my determination is made.

FINDINGS, CERTIFICATIONS, AND RECOMMENDATIONS

Based on the foregoing report and supporting data concerning the proposed project, I make the following findings and certifications:

1. I find and certify that the proposed project has engineering feasibility.
2. I find that the estimated cost of the proposed construction is \$1,000,000, which is exclusive of the cost of participation by the Department of Agriculture now estimated at \$5,000.
3. I find that the estimated cost which properly can be allocated to irrigation is \$1,000,000 (construction of irrigation features is estimated to require \$430,000 from General Fund appropriations, and \$570,000 from WPA and CCC funds).
4. I find that no part of the estimated cost can properly be allocated to municipal or miscellaneous water supplies or power with the expectation that it probably will be returned to the United States in revenues therefrom.
5. I find that the water users probably can repay, in accordance with the requirements of Section 4 of the Act of October 14, 1940, \$430,000, which is equal to that part of the estimated cost allocated to irrigation to be met by expenditure of moneys appropriated pursuant to the Act of August 11, 1939, and the amendments thereto.
6. I find that no part of the estimated cost can properly be allocated to the irrigation of Indian trust and tribal lands.
7. I find that no part of the estimated cost can properly be allocated to flood control.

I recommend that you approve the foregoing report and findings, and that you find, by your approval of this report, that services, labor, materials, easements, and other property, including money, for the construction of the project, should be made available to the Department of the Interior by the Work Projects Administration, the Civilian Conservation Corps, or other Federal agencies, to the extent necessary to make up the difference between the overall estimated costs of the project and the part thereof to be met by expenditures of moneys appropriated under the provisions of the Act of August 11, 1939, and its amendments. Also, I recommend that by your approval of this report you determine that the United States shall be reimbursed for such services, labor, et cetera, made available to the Department of the Interior in such amounts, if any, as on final determination of construction costs will not increase the repayment obligations beyond \$430,000.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE.

July 7, 1941.

Approved excepting that portion relating to the expenditure of funds by the Department of Agriculture from appropriations made pursuant to the act of August 11, 1939, as amended, the limit of cost to be \$1,000,000.

(Signed) FRANKLIN D. ROOSEVELT,
President.

PALISADES PROJECT

IDAHO-WYOMING

The Palisades project was found feasible and authorized by the Secretary on December 9, 1941, under the provisions of the Reclamation Project Act of 1939.

The project was reauthorized by the act of September 30, 1950 (64 Stat. 1083).

BUREAU OF RECLAMATION,
Washington, November 1, 1941.

The SECRETARY OF THE INTERIOR.

SIR: Under authority of the Reclamation Act of June 17, 1902 (32 Stat. 388), the Bureau of Reclamation conducted extensive studies of possibilities of alleviating severe water shortages and heavy crop losses which occur in the Upper Snake River Valley in low-water years. Crop losses in the 1,200,000 acres of land receiving water from the Snake River and its tributaries above Milner, Idaho, have ranged from \$1,000,000 to \$7,000,000 in years of critical shortage.

The report of the Bureau of Reclamation, which is attached, proposes the construction of the Palisades Dam Project, including a dam about 260 feet high and 2,200 feet long at the crest on the South Fork of the Snake River at the Palisades site about 50 miles east of Idaho Falls, Idaho, designed to create a reservoir of a capacity of 1,420,000 acre-feet; including at the dam a power plant with a capacity of 30,000 kilowatts or more, if summer water is used to produce a maximum amount of seasonal power, and transmission lines; and a water conservation program involving the drilling of wells and installation of appurtenances for rural domestic and stock water supplies, and other water conservation features and methods. A series of levees between Heise and Roberts, Idaho, will be required to complete the flood-control phase of the project.

The storage space is allocated as follows: The upper 500,000 acre-feet primarily for flood control; the next 800,000 acre-feet

primarily for irrigation use; and the lower 120,000 acre-feet for dead storage to provide power head. The proposed reservoir will provide a total space of 900,000 acre-feet for flood-control purposes when needed. The space available for irrigation purposes will provide an annual yield of 255,000 acre-feet of water from the surplus flow of the Snake River and through conservation of water now wastefully used.

The Palisades Dam project, as outlined, can be constructed at an estimated cost of \$24,092,000 allocated as follows:

	Total construction cost	Allocation to		
		Irrigation	Flood control	Power de- velopment
Dam and reservoir.....	\$18,125,000	\$7,794,000	\$7,431,000	\$2,900,000
Power plant, etc.....	2,811,000			2,811,000
Water-conservation program ¹	2,422,000	2,422,000		
Channel improvement ¹	734,000		734,000	
Total.....	24,092,000	10,216,000	8,165,000	5,711,000

¹ Expected to be undertaken individually.

The irrigators of the Upper Snake River Basin can repay the construction cost allocated to irrigation and pay the operation and maintenance cost of the irrigation feature of the project as contemplated by the reclamation laws.

The estimated annual revenues to be received from the sale of power from the Palisades project exceed the amount necessary to meet the requirements of subsection (c) of section 9 of the Reclamation Project Act of 1939 (53 Stat. 1187).

The benefits to be received from the flood-control features of the project exceed the estimated cost of these features. The report of the Bureau was submitted to the Chief of Engineers, War Department, for his opinion regarding the flood-control value of the Palisades Reservoir. In a letter dated May 2, he stated:

The plans and estimates of costs and benefits are in full agreement with studies made by this Department, report upon which will soon be made to Congress. I accordingly wish to advise that construction of the Grand Valley Reservoir, substantially as outlined in the report of the Bureau of Reclamation, and its operation in such manner as to provide for the reservation of not less than 500,000 acre-feet of storage space primarily for flood-control use, would effectively control floods in the irrigated area east of Idaho Falls, and that in my opinion a charge of \$7,431,000 toward the first cost of the reservoir, in the interest of flood control, is justified.

Growing defense needs in the area, as reflected in Federal Power Commission estimates, emphasize the need for this additional source of power. Possibilities connected with development of minerals, particularly phosphate, in the vicinity might soon render this project of strategic importance.

The annual benefits to be derived from the construction of the Palisades project exceed the annual costs and the project clearly

meets all requirements of the Reclamation Act of June 17, 1902 (32 Stat. 388), and the Reclamation Project Act of 1939 (53 Stat. 1187). The project is desirable in the public interest. Its success, however, depends on the conservation of 135,000 acre-feet of water now wastefully used, and on the willingness of the irrigators to pay \$1 per acre-foot per annum for the stored water which they will use. These matters can be adjusted in future negotiations, and construction should not be initiated until appropriate assurances have been received. I, therefore, recommend that you find the project feasible. I further recommend that the finding and the report be transmitted to the Congress in compliance with the provisions of the Reclamation Project Act of 1939.

Respectfully,

(Signed) JOHN C. PAGE,
Commissioner.

THE SECRETARY OF THE INTERIOR,
Washington, December 9, 1941.

The SPEAKER OF THE HOUSE OF REPRESENTATIVES.

SIR: I am submitting with this letter the Reclamation report on the Palisades Dam project on the South Fork of the Snake River near Idaho Falls, Idaho. The report consists of a letter, dated November 1, to me from the Commissioner, Bureau of Reclamation, the engineering and economic report transmitted with that letter, and this, the finding with respect to the feasibility of the project.

The Palisades Dam project is a multiple-purpose project involving major irrigation, flood control, and power benefits, and contemplating, as a part of the irrigation phase, the conservation of a large amount of water, which is now wastefully used. This conservation will be effected through a program of well drilling, and installation of appurtenances and other features to provide rural culinary and stock water.

The project is estimated to cost \$24,092,000, including an item of \$2,422,000 for water-conservation measures and another item of \$734,000 for channel improvements. These two features are expected to be undertaken individually. The Palisades Dam and Reservoir will cost \$18,125,000, and the power plant and transmission facilities, \$2,811,000.

The total cost, when considered in relation to the services rendered by the project, logically can be broken down and is allocated as follows:

Irrigation	\$10,216,000
Flood control	8,165,000
Power	5,711,000

As contemplated in Section 9 (b) of the Reclamation Project Act of 1939 (53 Stat. 1187), the benefit of consultations with the War Department was obtained in arriving at the cost properly allocable to flood control.

I find that the project as outlined by the Bureau of Reclamation is feasible from an engineering point of view, that it is desirable in the public interest, that it will improve the economic welfare of the area, and that it will prevent damages and increase the security of many people living in areas now endangered by floods.

The part of the cost allocated to irrigation can be returned to the Government in conformity with the reclamation laws. The part of the cost allocated to power may with assurance be expected to be returned in conformity with those laws, and in addition, power may be expected to serve growing defense needs.

I find that the repayable and returnable allocations, together with the allocation to flood control, equal the estimated cost of construction.

Defense requirements for power in the area to be served, moreover, have demonstrated an increasing need for additional electric generating capacity.

The Palisades Dam project clearly meets all the requirements imposed by Section 9 of the Reclamation Project Act of 1939 and, consequently, is authorized for construction as a Reclamation project.

The Director of the Bureau of the Budget has informed me that there would be no objection to the submission of this report to the Congress. He added, however, that "it would not be in accord with the program of the President, in the absence of evidence showing that the proposed works possess important defense value, to submit any estimate of appropriation for the construction of the project during the present emergency. It also would be contrary to the program of the President to submit any such estimate until local interests have given satisfactory assurance to the Secretary of the Interior that they will eliminate the wasteful use of water in the area to be affected by the project."

Very truly yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D. C., June 17, 1949.

The SECRETARY OF THE INTERIOR.

SIR: This is my supplemental report, findings, and recommendations under the Federal reclamation laws with respect to the Palisades Dam and Reservoir project, Idaho. My report is based

on the accompanying report of the regional director, dated June 1949.

The project was authorized initially in 1941 by the Secretary's report and findings dated December 9, 1941 (H. Doc. 457, 77th Cong., 1st sess.), under the provisions of section 9 of the Reclamation Project Act of 1939 (53 Stat. 1187).

The dam and related works as now proposed are essentially the same as those initially authorized. The reservoir will have a total active capacity of 1,200,000 acre-feet. The active capacity will be used jointly for irrigation and flood control under a plan of operation worked out by the Bureau with the Corps of Engineers. Its use for irrigation purposes will result in providing supplemental irrigation water for about 650,000 acres of land in the upper Snake River Valley. Having regard for the present plan with respect to flood-control operations, it is proposed to increase the capacity of the outlet works of the dam to permit greater flexibility in operations. It is proposed, also, to increase the minimum power head and, also, the maximum power installation, the latter to be approximately 112,500 kilowatts. In addition, it is proposed, by using Palisades capacity, to replace Grays Lake irrigation storage to permit the restoration of Grays Lake to its natural state, thereby increasing its usefulness as a wildlife management area. Through coordination of the irrigation operation of Palisades Reservoir with that of the existing Jackson Lake Reservoir in Jackson Hole, Wyo., it will be possible to stabilize the level of Jackson Lake and thereby greatly to enhance the recreational value of that famous scenic area in the foreground of the Grand Tetons. The total cost of construction of the project estimated as of January 1949 is \$76,601,000.

Of these estimated costs, it is proposed that, having regard for the benefits to accrue to these various purposes, there be allocated on a nonreimbursable basis the following amounts:

To flood control.....	\$22,733,300
To recreation	6,296,000
To fish and wildlife.....	2,805,000

The balance of the estimated construction costs will be reimbursable and is proposed to be allocated as follows:

To irrigation	\$21,526,000
To irrigation pumping power.....	9,063,900
To commercial power.....	14,176,800

There is expected to be some demand for water for miscellaneous purposes but no present space allocation is proposed for such purposes, though it is proposed there be recognition that a maximum of 85,000 acre-feet of space may be used. There is recognition, also, of the fact that an increased allocation to flood control may be found later to be justified, and of the need for adjusting the allocations to reimbursable costs when the actual reimbursable costs are determined.

It is now estimated that of the reimbursable construction costs allocated to irrigation a maximum of \$10,305,000 can and should be repaid by the water users if the repayment period remains at 40 years. A higher amount should be required to be repaid if that period is lengthened. The balance of the costs allocated to irrigation is expected to be repaid out of power revenues. Power revenues will be sufficient to return all costs properly allocated to commercial power with interest and to meet the irrigation costs assigned for repayment through power revenues, the latter to be met by the application of the interest component and of such additional power revenues as may be required.

The success of the project is dependent on having continued assurances that an average annual water savings of 135,000 acre-feet will be realized. This is expected to be accomplished by means of contractual arrangements with the water users of the upper Snake River Valley whereby they will agree to curtail certain wasteful winter water diversions. Tentative commitments on this matter have been given by resolutions of the governing bodies of the interested water users' organizations. These are regarded as sufficient to justify initiation and continuation of construction, but it may be desirable to have some additional means of bringing about the translation of these commitments into contractual assurances before the project is completed.

I concur in and adopt the recommendations of the regional director, and in particular, the recommendations set out in part V of his report.

I recommend that you approve and adopt this as your proposed supplemental report for presentation to the President and the Congress for appropriate action. Since the report is supplemental to the report of December 9, 1941, by which the project was initially authorized and since the irrigation aspects of the major structure will not be changed by this supplemental report, it is concluded that the procedure of section 1 of the 1944 Flood Control Act (58 Stat. 887) is inapplicable.

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved and adopted July 1, 1949.

(Signed) J. A. KRUG,
Secretary of the Interior.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., July 19, 1949.

The PRESIDENT,
The White House
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: Enclosed is a supplemental report prepared by the Bureau of Reclamation on the Palisades Dam and Reservoir project, which I approved and adopted as my report on July 1, 1949.

The report deals with the allocation and repayment of costs of the authorized multiple-purpose Palisades Reservoir which is to be built on the Snake River in southeastern Idaho. The estimated cost of the project at price levels prevalent in January of this year is \$76,601,000. Having regard for the benefits accruing to the various purposes, I find that, of the total cost of the project, \$22,733,300 should be allocated to flood control, \$6,296,000 should be allocated to recreation, and \$2,805,000 should be allocated to the preservation and propagation of fish and wildlife, all of which should be nonreimbursable. The balance of the construction costs can be repaid by the water and power users and should properly be allocated as follows: to irrigation \$21,526,000; to irrigation pumping power, \$9,063,900; and to commercial power, \$14,176,800. I find that the irrigation water users can and should repay a maximum of \$10,350,000, over a 40-year repayment period, and that the balance of the reimbursable costs can be repaid, under the reclamation laws, out of power revenues.

The allocation to flood control has been made following consultation with the Chief of Engineers, Department of the Army, and the operation of the reservoir for flood control will be in accordance with regulations prescribed by the Secretary of the Army.

Unless you have objection, the enclosed report on the Palisades Dam and Reservoir will be transmitted to the Congress for appropriate action.

Sincerely yours,

(Signed) J. A. KRUG,
Secretary of the Interior.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., March 4, 1950.

The PRESIDENT,
The White House,
(Through the Bureau of the Budget.)

MY DEAR MR. PRESIDENT: On July 19, 1949, former Secretary Krug submitted this Department's supplemental report on the Palisades Dam and Reservoir project to you for advice as to the relationship of the proposals contained therein to your program.

Copies of the report were sent also to officials of the States of Idaho, Wyoming, and to the Secretary of the Army, Secretary of Agriculture, the Chairman of the Federal Power Commission, and the Director, Office of Domestic Commerce, Department of Commerce for their information and such comments as they wished to make, although it was our view that clearance was not required as a matter of law in the circumstances of this case. Copies of most of these comments have heretofore been made available informally to the Bureau of the Budget, but this presentation will complete the formal presentation of all of them. The Governor of the State of Idaho did not submit comments on the report. However, at the hearings before congressional committees on H. R. 5506 and S. 2195, companion bills which among other things would reauthorize the Palisades Dam and Reservoir, a representative of the Governor testified in favor of the project.

After consideration of all the comments received, I find no need for revising this Department's report. In his comments, the Chairman of the Federal Power Commission questioned the use of the interest component of the power revenues for the purpose of assisting in the repayment of irrigation costs. There is enclosed, also, a copy of our reply giving the justification for the position taken in the report, this being but a continuation of present practice of this Department on the basis of the present Federal reclamation laws.

H. R. 5506 and S. 2195, companion bills which would reauthorize the Palisades project in accordance with our supplemental report have been considered at hearings before subcommittees of the House Public Lands Committee and the Senate Committee on Interior and Insular Affairs and both committees have made favorable reports on the bills. The chairmen of these committees have requested this Department to submit its further views on these bills. The draft of our proposed report on those bills is now also before the Bureau of the Budget for determination of its relationship to the program of the President.

I would appreciate having your views as to the relationship of

the supplemental report on the Palisades project to your program so that I can advise the Congress accordingly.

Sincerely yours,

(Signed) OSCAR L. CHAPMAN,
Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington 25, D. C., July 17, 1950.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This will acknowledge receipt of your letter dated March 4, 1950, requesting advice as to the relationship to the President's program of the proposals contained in your Department's accompanying supplemental report entitled "Palisades Dam and Reservoir Project, Idaho, Allocation and Repayment of Costs," prepared by the regional director, region 1, and dated June 1949. Enclosed with your letter were copies of the comments on the report received from the State governments and interested Federal agencies to whom the report was submitted for review. It is understood that the report is to provide the basis for amendatory legislation which would authorize an increase in the scope of the project by enlarging and adding to the purposes which it would serve.

The Palisades project, as initially authorized by the Secretary of the Interior's report and findings dated December 9, 1941 (H. Doc. 457, 77th Cong., 1st sess.), would be a multiple-purpose development providing for a dam and reservoir on the main stem of the Snake river in eastern Idaho, for conservation of supplemental irrigation water supply, flood control, and for hydroelectric power generation and transmission. As revised, the present plan provides for expansion of the power installation from 30,000 kilowatts to 112,500 kilowatts, increase in the capacity of the outlet works of the dam and, in addition, the installation of fish and wildlife facilities at Grays Lake, Idaho, and of recreation facilities at the Palisades Reservoir. The estimated cost of the proposed project as authorized in 1941 was \$24,092,000, while the total estimated cost of the development, as presently proposed, is \$76,601,000 based on January 1, 1949, price levels. The increase is attributed to higher costs of construction, the expansion of facilities, and the addition of fish and wildlife and recreational facilities.

The report states that the only water which would be stored in the Palisades Reservoir is the above-average stream flow which could be carried over to years of below-average stream flow together with whatever water is saved by the proposed elimination of present wasteful winter diversions. Existing reservoirs in the

Upper Snake River Valley are considered to have capacities sufficient to hold all the presently storable water in years of average or less than average stream flow. The operation plan proposed for Palisades Reservoir is expected to result in providing supplemental irrigation water for about 650,000 acres of land in the Upper Snake River Valley and thus eliminate all shortages on existing projects except during extremely dry years. In this connection, it is noted that an average of 216,000 acre-feet of additional water is proposed to be made available annually by the project which would amount to only approximately 4 inches per acre per year for the 650,000 acres assuming that 100 percent of the water would reach the land. Average annual irrigation benefits are estimated to be \$1,981,000.

* * * * *

Accordingly, you are advised that, while there would be no objection to the submission of the proposed report to the Congress authorization of the project would be without objection only if, in accordance with above comments:

(a) The allocation to fish and wildlife is limited to that part of the cost of the Palisades project required for the prevention of loss or damage to fish and wildlife on the Snake River due to the construction of this project;

(b) The provision of recreational facilities and the allocation of costs thereto are limited to the scope and repayment requirements set forth in the interim recreation policy contained in Director Pace's letter to you of January 27, 1950;

(c) It is understood that the use of the interest component for aiding the return of irrigation costs in the eventual repayment plan for the Palisades project will be dependent on the policy established after the President's Water Resources Policy Commission has reported; and

(d) Accomplishment of the expanded project is made conditional upon execution of the necessary water-savings contracts to the satisfaction of the Secretary of the Interior.

Sincerely yours,

(Signed) F. J. LAWTON,
Director.

REAUTHORIZATION

An act to authorize the Palisades Dam and Reservoir project, to authorize the North Side Pumping Division and related works, to provide for the disposition of reserved space in American Falls Reservoir, and for other purposes. (Act of September 30, 1950, 64 Stat 1083, Public Law 864, 81st Cong., 2d sess.)

* * * That the Palisades Dam and Reservoir project, Idaho, heretofore authorized under the provisions of the Federal reclamation laws by the presentation to the President and the Congress

of the report of December 9, 1941 (House Document Numbered 457, Seventy-seventh Congress, first session), by the Secretary of the Interior (herein called the Secretary), is hereby reauthorized under the Federal reclamation laws for construction and operation and maintenance substantially in accordance with that report as supplemented and modified by the Commissioner's supplemental report and the recommendations incorporated by reference therein, as approved and adopted by the Secretary on July 1, 1949, and as including, upon approval by the President of a suitable plan therefor, facilities for the improvement of fish and wildlife along the headwaters of the Snake River, such facilities to be administered by the Fish and Wildlife Service: *Provided*, That notwithstanding recommendations to the contrary contained in said report (a) the Secretary shall reserve not to exceed fifty-five thousand acre-feet of active capacity in Palisades Reservoir for a period ending December 31, 1952, for replacement of Grays Lake storage, but no facilities in connection with the proposed wildlife management area at Grays Lake shall be built and no allocation of construction costs of the Palisades Dam and Reservoir by reason of providing replacement storage to that area shall be made until the development and operation and maintenance of the wildlife management area has been authorized by Act of Congress, and (b) the nonreimbursable allocation on account of recreation shall be limited to the costs of specific recreation facilities in an amount not to exceed \$148,000.

SEC. 2. There are hereby authorized for construction and operation and maintenance under the Federal reclamation laws: (a) the north side pumping division of the Minidoka project, this to be substantially in accordance with the Commissioner's report and the recommendations incorporated by reference therein, as approved and adopted by the Secretary on July 1, 1949: *Provided*, That, notwithstanding recommendations to the contrary contained in said report, (1) lease or sale of that portion of the power service system extending from the substations to the pumping plants may be made to any entity on terms and conditions that will permit the United States to continue to provide power and energy to the pumping facilities of the division, and, in the event of lease or sale to a body not entitled to preference in the purchase of power under the Federal reclamation laws, will preserve a reasonable opportunity for subsequent lease or sale to a body that is entitled to such privilege, (2) no allocation of construction costs of the division shall be made on a nonreimbursable basis by reason of wildlife benefits, and (3) there shall be, in lieu of a forty-year period, a basic repayment period of fifty years for repayment, in the manner provided in the recommendations, of the irrigation costs assigned for repayment by the water users; and (b) for the furnishing of electric power for irrigation pumping to that division and for other purposes, power generating and related facilities at American Falls Dam. These generating and related facilities, to the extent the Secretary finds to be proper for pay-out and rate-making purposes, may be accounted for together with other power facilities operated by the Secretary that are interconnected with

the American Falls Dam power facilities, excluding any power facilities the net profits of which are governed by subsection I of section 4 of the Act of December 5, 1924 (43 Stat. 703). The authorizations set forth in the preceding sections 1 and 2 shall not extend to the construction of transmission lines, substations, or distribution lines unless such facilities are for the purposes of interconnecting the power plants herein authorized, or for the delivery of power and energy for use in connection with the construction, operation, and maintenance of the projects herein authorized.

SEC. 3. The Secretary is hereby authorized to contract, under the Federal reclamation laws, with water users and water users' organizations as to the use for their benefit of the heretofore reserved storage capacity in American Falls Reservoir. Not to exceed three hundred and fifteen thousand acre-feet of that capacity shall be made available to those who have heretofore had the use of reserved capacity under lease arrangements between the United States and the American Falls Reservoir district of Idaho, the distribution of this capacity among contractors to be determined by the Secretary after consultation with the interested water users' organizations or their representatives. Of the balance of the reserved capacity, forty-seven thousand five hundred and ninety-three acre-feet are hereby set aside for use under contract for the benefit of the lands comprising unit A of the north side pumping division of the Minidoka project, and seventy-one thousand acre-feet are hereby set aside for use under contract for the benefit of those lands in the Michaud area which may hereafter be found to be feasible of development under irrigation. Contracts for the repayment of construction charges in connection with reserved capacity shall be made without regard to the second proviso of the tenth paragraph (Minidoka project, Idaho) under the heading "Bureau of Reclamation" of the Act of June 5, 1924 (43 Stat. 390, 417). Such contracts shall require the repayment of all costs determined by the Secretary to be allocable to the reserved capacity, less, in the case of the three hundred and fifteen thousand acre-feet of capacity above described, three hundred and eighty-six four-hundred-and-thirty-fourths of the revenues realized, after deduction of what the Secretary determines to be an appropriate share for operation, maintenance, and replacements, from the leasing of that capacity for irrigation purposes up to the time water first becomes available in Palisades Reservoir and, in the case of the capacity set aside for the north side pumping division, all other revenues realized from or connected with the reserved capacity and which the Secretary determines to be available as a credit against the cost allocable to that division.

SEC. 4. (a) The continuation of construction of Palisades Dam beyond December 31, 1951, or such later controlling date fixed by the Secretary as herein provided, is hereby made contingent on there being a finding by the Secretary by the controlling date that contracts have been entered with various water users' organizations of the Upper Snake River Valley in Idaho that, in his opinion, will provide for an average annual savings of one

hundred and thirty-five thousand acre-feet of winter water. If in the Secretary's judgment the failure of the requisite organizations so to contract by the controlling date at any time is for reasons beyond the control of those organizations, he may set a new controlling date but not beyond December 31, 1952.

(b) Repayment contracts made in connection with the use of capacity in either American Falls or Palisades Reservoir may include, among other things, such provisions as the Secretary determines to be proper to give effect to recommendations referred to in section 1 of this Act, and particularly those concerning the continued effectiveness of the arrangements as to the minimum average annual water savings.

SEC. 5. There is hereby authorized to be appropriated, out of any funds in the Treasury not otherwise appropriated, the sums of not to exceed \$76,601,000 for the Palisades Dam and Reservoir project, Idaho, \$11,395,000 for the Minidoka project north side pumping division, Idaho, and \$6,600,000 for the American Falls power plant.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., November 9, 1950.

Hon. SAM RAYBURN,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: Transmitted herewith is a supplemental report on the allocation and repayment of costs of the Palisades Dam and Reservoir project in Idaho.

This project was authorized initially by a report and findings of the Secretary of the Interior, dated December 9, 1941 (H. Doc. 457, 77th Cong., 1st sess.), under the provisions of section 9 (a) of the Reclamation Project Act of 1939.

The dam and related works, as contemplated in the attached report, vary in certain respects from those originally authorized. The reservoir will have a total active storage capacity of 1,200,000 acre-feet. This capacity will be used jointly for irrigation and flood control under a plan of operation worked out by the Bureau of Reclamation and the Corps of Engineers, Department of the Army. The reservoir will supply supplemental irrigation water for about 650,000 acres of land in the Upper Snake River Valley. A power plant having an installed capacity of approximately 112,500 kilowatts will be installed at the dam. The estimated cost of construction of the project is \$76,601,000.

Copies of the report were sent to officials of the States of Idaho and Wyoming and to the Secretary of the Army, Secretary of Agriculture, Chairman of the Federal Power Commission, and the Director of the Office of Domestic Commerce, Department of

Commerce, for their information and such comments as they wish to make. Copies of all the comments received are enclosed, together with our response to the Chairman of the Federal Power Commission.

The report was submitted to the President, and the Director of the Bureau of the Budget, by letter dated July 17, 1950, advised that, while there would be no objection to the submission of the report to the Congress, authorization of the project would be without objection only if certain changes were made. A copy of this letter is enclosed.

Under the terms of Public Law 864, approved by the President on September 30, 1950, the Palisades project has now been reauthorized essentially in accordance with the enclosed report but with certain modifications suggested, in part, by the comments of the Director of the Bureau of the Budget. It would be appropriate for the enclosed report and the accompanying comments to be printed as a public document.

Sincerely yours,

(Signed) OSCAR L. CHAPMAN,
Secretary of the Interior.

PALO VERDE PROJECT

CALIFORNIA-ARIZONA

The construction of works to reestablish a means of diversion of its water supply for the Palo Verde Irrigation District was authorized by Congress on August 31, 1954 (68 Stat. 1045, Public Law 752, 83d Cong., 2d sess.).

An act authorizing construction of works to reestablish for the Palo Verde Irrigation District, California, a means of diversion of its irrigation water supply from the Colorado River, and for other purposes. (Act of August 31, 1954, 68 Stat. 1045, Public Law, 752, 83d Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That for the purpose of reestablishing for the Palo Verde Irrigation District, a public agency of the State of California, a means of diverting its irrigation water supply from the Colorado River, the Secretary of the Interior is authorized to construct a dam across the Colorado River at or near the district's present or former intake capable of diverting water into said intake at an elevation of two hundred eighty-two and three-tenths feet above mean sea level, Bureau of Reclamation datum, and works appurtenant to said dam which are required to carry out the purposes stated.

SEC. 2. Prior to commencing construction of the works authorized in section 1 of this Act, the Palo Verde Irrigation District shall have entered into a contract with the United States, in form and content satisfactory to the Secretary, undertaking—

(a) to furnish to the United States for the construction and maintenance of said dam and appurtenant works the use of all lands, easements, rights-of-way, and other interests in land required for said purposes, except those which the United States already has a full and perfect right to use or which lie within the Colorado River Indian Reservation, and to save the United States harmless from all claims arising from the use and occupancy of said lands and interests in land and the operation and maintenance of said dam and appurtenant works;

(b) to operate and maintain said dam and appurtenant works without cost to the United States upon substantial completion thereof as determined by the Secretary; and

(c) to accept title to said dam, appurtenant works, lands, and interests in land upon payment by the district (which payment shall be made over a period of not more than fifty years) of the sum of \$1,175,000, and upon repayment of any loan made pursuant to section 4, clause (c), of this Act: *Provided*, That there shall be and is hereby reserved to the United States or there shall be made available to it, as the case may require, the exclusive right to utilize, without cost to it, said dam, appurtenant works, lands, and interests in land for such development, generation, and transmission of electric power and energy as may hereafter be authorized by law: *Provided further*, That in the event it becomes practicable to develop hydroelectric energy at this site, the division of such energy between the United States and the district shall be a matter of negotiation prior to construction of any powerplant.

SEC. 3. To aid in the construction, operation, and maintenance of the works authorized by this Act, the Secretary shall have the same authority as is given him with respect to the Colorado River front work and levee system by the second sentence of the amendment to the Act of January 21, 1927 (44 Stat. 1010, 1021), which is contained in the Act of June 28, 1946 (60 Stat. 338).

SEC. 4. The Secretary is further authorized—

(a) and directed to remove, or otherwise to nullify the effects of, the temporary rock weir across the Colorado River which was constructed under authority of the First Deficiency Appropriation Act, 1944 (58 Stat. 150, 157);

(b) to construct levees, ditches, and other works required to protect the lands of the Colorado River Indian Reservation upstream from the diversion dam authorized in section 1 of this Act against Colorado River flows of seventy-five thousand cubic feet per second and to provide a means of draining said lands;

(c) to lend to the Palo Verde Irrigation District, upon terms and conditions satisfactory to the Secretary, the sum of not more than \$500,000 for the modification of the district's existing works to accommodate them to the works authorized in section 1 of this Act, the sum loaned to be repaid over a period of not more than fifty years from the date of the loan; and

(d) to grant to the United States, upon paying the sum of \$50 per acre into the Treasury to the credit of the Colorado River Indian Tribes of the Colorado River Indian Reservation, such lands, easements, rights-of-way, or other interests in land within the Colorado River Indian Reservation, not exceeding thirty acres in all, as may be required for the construction and maintenance of the works authorized in section 1 of this Act: *Provided*, That nothing contained herein shall preclude said tribes, if they believe that such payment constitutes less than just compensation for the extinguishment or impairment of their interest in the lands and interests in land in question, from maintaining an appropriate action against the United States for such compensation.

SEC. 5. The use of all water diverted for the district through said works from the Colorado River shall be subject to and controlled by the Colorado River Compact, the Boulder Canyon Proj-

ect Act (45 Stat. 1057), the California Limitation Act (Stats. Cal. 1929, ch. 16), contract dated February 7, 1933, between the United States and Palo Verde Irrigation District, and the Mexican Water Treaty (Treaty Series 994), and shall be included within and shall in no way increase the total use of water to which the State of California is entitled as limited by said compact, statutes, contract, and treaty.

SEC. 6. Neither the enactment of this Act nor anything contained in it nor any action taken pursuant to it shall be deemed a recognition or admission of any obligation or liability whatsoever to the Palo Verde Irrigation District on the part of the United States.

SEC. 7. All costs incurred under authority of this Act, except those to be repaid by the Palo Verde Irrigation District, shall be nonreimbursable.

SEC. 8. There are hereby authorized to be appropriated, out of any moneys in the Treasury not otherwise appropriated, the sum of \$7,099,000.

UNITED STATES DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D. C., February 9, 1955.

MEMORANDUM.

To: Secretary of the Interior.
From: Commissioner, Bureau of Reclamation.
Commissioner, Bureau of Indian Affairs.
Subject: Operation and maintenance of certain facilities constructed under the Act of August 31, 1954 (68 Stat. 1045), Palo Verde Project.

Representatives of our respective agencies have, on several occasions, discussed among themselves and with Assistant Secretaries Aandahl and Lewis the problem of responsibility for the operation and maintenance of "levees, ditches and other works" for construction of which was authorized by the Act of August 31, 1954 (68 Stat. 1045).

We have come to a mutual understanding in regard to Section 4 (b) of the Act which refers to levees and drains to be constructed on the Colorado River Indian Reservation for the protection of Indian lands. Because these works are to be constructed within the Colorado River Indian Reservation and because the Bureau of Indian Affairs already has an operating force and equipment on the Project we have concluded that the Bureau of Indian Affairs should be responsible for the operation and maintenance of said works. Further, we have concluded that under the Act the cost of operation and maintenance of these facilities is nonreimbursable.

In view of the above we recommend for your approval that the

Bureau of Indian Affairs be assigned the responsibility for the operation and maintenance of the Palo Verde levees and drains to be constructed within the Colorado River Indian Reservation under the Act of August 31, 1954. The funds to be used for this purpose are to be nonreimbursable and the Department will include in its budget ceiling an item to cover such costs.

If you approve the above recommendation, please signify by approval of this memorandum.

(Signed) W. A. DEXHEIMER,
Commissioner, Bureau of Reclamation.

(Signed) GLENN L. EMMONS,
Commissioner, Bureau of Indian Affairs.

I concur:

(Signed) FRED G. AANDAHL,
Assistant Secretary—Water and Power Development.

I concur:

(Signed) ORME LEWIS,
Assistant Secretary—Public Land Management.

Approved: March 17, 1955.

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

PAONIA PROJECT

COLORADO

The Paonia project¹ was found feasible by the Secretary on March 16, 1939, and approved by the President on March 18, 1939. However, the project was not constructed pursuant to that authorization. The act of June 25, 1947 (61 Stat. 181), authorized construction of the project in accordance with the report dated January 2, 1946, of the Regional Director of the Bureau of Reclamation, Region 4.

OFFICE OF THE SECRETARY,
Washington, March 16, 1939.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The acts of June 25, 1910 (36 Stat. 835), and December 5, 1924 (43 Stat. 701), provide, in effect, that no irrigation project to be constructed by the Bureau of Reclamation under the Reclamation Law shall be undertaken (1) until the Secretary of the Interior (a) has obtained detailed information concerning the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development of the project, and (b) has made a finding in writing that the project is feasible, is adaptable for actual settlement and farm homes and will probably return the cost thereof to the United States; and (2) until the project has been recommended for construction by the Secretary and approved by the President.

The following report on the Paonia project in Delta and Gunnison Counties in west central Colorado is made to you, in accordance with the foregoing statutory provisions.

The lands to be benefited by the project lie on both slopes of the Valley of the North Fork of the Gunnison River near the towns of Paonia and Hotchkiss, and have been irrigated and intensively cultivated for many years, the first water filing having been made in the early 1880's. Peaches and small fruit will be the most im-

¹ See Colorado River Storage project.

portant crops, and orchards now cover about 26 percent of the irrigated lands. The farms are well improved and are under production so far as the uncertain water supply will permit. The present irrigation supply is derived from the North Fork and its tributaries, supplemented somewhat by storage in a few small reservoirs. The supply is inadequate in practically all years and in the driest years serious crop failures are incurred.

Land prices vary largely according to location with respect to improved highways and towns and to the quality of the soil, whether adapted to forage crops or orchards. The value of irrigated land ranges from fifty dollars an acre for ordinary cultivated areas to several hundred dollars per acre for producing orchard tracts.

The principal features proposed to be constructed are two storage reservoirs on tributaries of the North Fork. One of these will be located at the Horse Ranch site on Anthracite Creek, and the other at the Beaver site on the East Fork of Minnesota Creek. The Horse Ranch dam will be a rolled earth fill, 100 feet in height and 1,200 feet in crest length, and is estimated to cost \$660,000. The Beaver dam will be a rolled earth fill, approximately 140 feet high and 900 feet long, having an estimated cost of \$334,000.

The Horse Ranch reservoir of 8,500 acre-feet capacity, will furnish a supplemental supply to an area of 5,682 acres, located on the north side of the North Fork Valley, known as the Fire Mountain division. The Beaver reservoir, of 1,900 acre-feet capacity, will provide a supplemental supply to the Minnesota division, lying on the south side of the Valley and on Minnesota Creek. The supplemental supply of water, made possible by the project development, will prevent crop loss in practically all years and will, as well, permit the growing of late potatoes and other specialty crops.

The construction cost will be repaid by the sale of water for irrigation purposes. Organizations of the landowners on each of the divisions will be required to execute repayment contracts before any construction is initiated.

The annual cost to the Fire Mountain division for construction repayment and reservoir operation, maintenance, and district expense is estimated to be \$19,500. Based on a division area of 5,682 acres, the annual costs would be \$3.43 per acre per year. This cost is well within the ability of these lands to repay.

The annual cost to the Minnesota division, including construction repayment and reservoir operation, maintenance, and district expense, is estimated to be \$10,000. Based on a division area of 2,100 acres, the annual cost would be \$4.75 per acre per annum. This amount can be repaid by land in mature orchards or sugar beets. However, it may be necessary to draft the contracts with these water users to provide for smaller payments during earlier years and larger payments after the lands are planted to higher priced crops.

The foregoing data justify the conclusion that construction of the Fire Mountain division is feasible from an engineering and economic standpoint and I so find and declare. Construction of the

Minnesota division is feasible from an engineering standpoint but it probably will be necessary to draft the contracts in the manner described above. On this basis, the construction charges probably can be repaid within forty years without undue burden.

In order to provide a supplemental supply of water for lands now encountering shortages each year and in order to stabilize the agricultural industry in this area without undue delay, I recommend that the Paonia project be approved and that construction be started at an early date.

Sincerely yours,

(Signed) E. K. BURLEW,
Acting Secretary of the Interior.

Approved March 18, 1939.

(Signed) FRANKLIN D. ROOSEVELT,
President.

BUREAU OF RECLAMATION,
Salt Lake City 8, Utah, January 2, 1946.

From: Regional Director, Region 4, Salt Lake City, Utah
To: The Commissioner, Bureau of Reclamation
Subject: Report on Paonia project, Colorado—Upper Colorado River Basin.

1. This letter is the regional director's report on the potential Paonia project on the North Fork of the Gunnison River in west central Colorado. The substantiating material on which this report is based is appended hereto.

* * * * *

30. Since the Paonia project has engineering feasibility, is economically sound, and is desirable in the regional and national interest, it is recommended:

(1) That the revised plan of development for the Paonia project as described in this report be approved.

(2) That the three principal features listed in paragraph 15, and such related works as may be incidental thereto, constituting the development of the Paonia project in the Colorado River Basin in Colorado, be authorized to be constructed, operated and maintained by the Bureau of Reclamation, Department of the Interior, essentially in accordance with the plan set forth in this report, with such modifications, omissions, or additions to the works as the Commissioner of Reclamation, with the approval of the Secretary, may find proper for carrying out the project to the end of providing water for the irrigation of approximately 14,750 acres in the areas indicated in this report and of accomplishing the flood-control purposes of the project.

(3) That the project be authorized to be constructed, operated, and maintained in accordance with the Federal reclamation laws (act of June 17, 1902, 32 Stat. 388, and acts amendatory thereof or supplementary thereto): *Provided*,

(a) That this report shall be deemed to satisfy the requirements of the Federal reclamation laws governing the submission to the President and the Congress of a finding of engineering feasibility;

(b) That the allocation of costs shall comprehend the estimated cost of all of the works proposed in this report to be constructed by said Bureau for development of the Paonia project;

(c) That the water users shall be required to pay only that part of the estimated construction cost of the project which, in the judgment of the Secretary of the Interior upon consideration of all appropriate factors, they should reasonably be expected to repay in the maximum repayment period and on terms and conditions available under provisions of subsection 9 (d) of the Reclamation Project Act of 1939;

(d) That the excess, if any, of the total estimated cost of all works proposed in accordance with this report to be constructed by said Bureau for development of the Paonia project over the aggregate of the estimated repayments and returns, together with the excess, if any, of actual costs over total estimated costs, shall be nonreimbursable.

(4) That use of the unexpended balance (\$848,470.50) of the total reimbursable fund of \$900,000 heretofore appropriated for the Paonia project from the Reclamation Fund in the Interior Appropriations Acts of 1940 and 1942 be authorized to begin construction immediately of the works under the revised plan of development described in this report and that this fund be supplemented by new appropriations as required for proper development of the project.

(Signed) E. O. LARSON,
Regional Director, Region 4.

BUREAU OF RECLAMATION,
Washington, May 16, 1946.

The SECRETARY OF THE INTERIOR.

SIR: I submit herewith my report on the Paonia project, Colorado. The project is located in the valley of the North Fork of the Gunnison River, a tributary to the Colorado River in west-central Colorado.

A project, known as the Paonia project, Colorado, was authorized in 1939. It consists of the Horse Ranch Dam, on Anthracite Creek, and Beaver Dam, on the East Fork of Minnesota Creek. The Congress, in the Interior Department Appropriation Act of

1940, appropriated \$300,000 for that project. An additional sum of \$600,000 was appropriated for that project in the Interior Department Appropriation Act of 1942. These amounts were appropriated from the reclamation fund and are reimbursable under the Federal reclamation laws. However, no part of the project has been constructed, since core drillings, made after the project was authorized, showed that the dam sites were more costly and less attractive than preliminary investigations had indicated.

Further investigation has resulted in the development of the plan proposed in the attached report. The works now proposed involve the construction of the Spring Creek Dam on Muddy Creek, a tributary to the North Fork of the Gunnison River, to form a 14,000 acre-foot reservoir which would control and supply water for the supplemental irrigation of lands under the Fire Mountain canal; the enlargement and extension of the Fire Mountain canal, which diverts water from the North Fork of Gunnison River; and the reconstruction and enlargement of the Overland canal, which diverts water from Leroux Creek to the Redlands Mesa. The development would provide a supplemental water supply for 12,750 acres of cultivated land now inadequately irrigated and a water supply for 2,000 acres of new land. Local flood protection also would be provided.

If the Paonia project is constructed in accordance with the revised plans outlined briefly in the preceding paragraph, economic conditions in the valley of the North Fork of the Gunnison River will be improved and provision will have been made for normal growth in future years. Irrigation is well established in the valley, but over 65 percent of the 21,000 acres now under irrigation suffer water shortages of varying degrees in practically all years and, in dry years, serious crop failures are experienced.

The project is feasible from an engineering standpoint, and it is economically justified. The regional director finds a favorable ratio of benefits to costs of 2.6 to 1, based on 1940 costs estimated at \$1,521,000. Even under present costs, which are about 60 percent higher than 1940, there is a favorable ratio of benefits to costs of better than 1.6 to 1.

Accordingly, I recommend that you adopt the attached report as your proposed report on the Paonia project and that you authorize me, in your behalf, to transmit copies of this letter and of the attached proposed report, to the affected State of Colorado and to the Secretary of War, in accordance with requirements of the Flood Control Act of December 22, 1944 (58 Stat. 887). Upon clearance with the affected State and with the Secretary of War, copies of the report together with the comments received, if any, will be submitted for your transmittal to the President and, subsequently, to the Congress.

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved May 23, 1946.

(Signed) OSCAR L. CHAPMAN,
Acting Secretary of the Interior.

BUREAU OF RECLAMATION,
Washington, May 9, 1947.

The SECRETARY OF THE INTERIOR.

SIR: On May 16, 1946, I transmitted to you a report on the Paonia project, Colorado, which was adopted by Acting Secretary Chapman on May 23, 1946, as the proposed report of the Secretary of the Interior. Copies of the proposed report were then sent to the Secretary of War and to the State of Colorado, pursuant to the provisions of section 1 of the Flood Control Act of 1944 (58 Stat. 887). Copies were also sent to the Federal Power Commission and the Department of Agriculture. The written views of each agency have been received and a copy of each letter is enclosed herewith. The State of Colorado desires and recommends construction of the project with certain changes in the repayment plan. The interested Federal agencies advise that constructing the project will not duplicate or interfere with any of their plans.

Section 9 (b) of the Reclamation Project Act of 1939 provides that—

In connection with any new project, new division of a project, or supplemental works on a project there may be allocated to flood control or navigation the part of said total estimated cost which the Secretary may find to be proper.

It provides, also, that—

In connection with the making of such an allocation, the Secretary shall consult with the Chief of Engineers and the Secretary of War * * *

Such consultation has taken place. The Secretary of War and the Chief of Engineers have advised, in effect, that, unless the proposed Spring Creek Reservoir is to be operated in accordance with regulations prescribed by the Secretary of War, as provided for in section 7 of the Flood Control Act of 1944, it would not be appropriate to allocate part of the cost of its construction to flood control. On the other hand, counsel for this Bureau advise that authority to allocate costs to flood control under section 9 (b) of the Reclamation Project Act of 1939 is not dependent upon the allocation of flood control space in reservoirs and that the requirements of section 7 of the Flood Control Act of 1944 do not become effective, with respect to Federal Reclamation reservoirs, unless there is an allocation of space therein exclusively for flood control purposes.

It is perfectly clear to us that the mere fact that a portion of the cost of a project has been allocated to flood control does not necessarily mean that any portion of the storage provided has been or should be so allocated. If the Spring Creek Reservoir is operated as proposed in appendix E² to the regional director's

² Not printed.

report, the entire active storage capacity of 13,000 acre-feet would, in effect, be used jointly for flood control and irrigation, and, seasonably, in the winter and spring, the period during which all flood flows of any consequence (without exception such flows have resulted from spring melting of snow accumulated on the watershed, accelerated by warm rains or warm winds) have always occurred, heretofore, the storage would be used entirely for flood control until the danger of flood is past. The position apparently taken by the Secretary of War is contrary to the experience gained by the Bureau in the operation of many reservoirs for irrigation used primarily, over many years. Definite, measurable reductions of flood peaks are obtained simply by the regulation and retardation effects of a reservoir on a stream, and the beneficial effects of such reservoirs can be greatly increased through evacuation of storage space in anticipation of high spring run-off, the extent of which is estimated by surveys of the snow cover in the watersheds above the reservoir. The flood-control benefits indicated in the report would result from the seasonal method of operation proposed in the report. The average annual benefit computed takes account of the seasonal type of operation. Hence, the flood-control benefits claimed are assured and the proposed allocation of \$32,000 to flood control is justified.

The Secretary of Agriculture, in commenting on the report, agrees that the project is a worth-while one, and believes that the extent of present irrigation development in the area justifies improving the water supply. He states that the Department of Agriculture, through its control of the national forest lands which comprise the bulk of the watershed of East Muddy Creek, will assist in developing more intensive watershed management by reducing the use of this watershed for grazing, thus assuring the maximum serviceable life of the existing and proposed irrigation facilities.

The Secretary also has suggested that a more detailed treatment of the land and water use phases of the project will be essential to a sound irrigation development. These necessary detailed studies on the land and water problems of the Paonia project are scheduled for initiation immediately following authorization. They will constitute an integral part of the preconstruction activities required for successful construction, development, and operation of the project.

As I have already pointed out, the State of Colorado has approved the report, except that it recommended that the report be appropriately modified and changed to provide for increased unit costs of water to the water users and for an extension of the repayment period (to approximately 60 years). In addition, in commenting on the Colorado River Basin report, the State of Colorado has assured us that the Paonia project will cause a depletion of water well within any ultimate allocation of Colorado River water which may be made to the State by the Upper Colorado River Basin Compact Commission.

Subsequent to my previous letter of May 16, 1946, transmitting the Paonia report to you, Public Law 732, Seventy-ninth Congress,

was adopted on August 14, 1946. This act provides that the Secretary of the Interior shall make findings on the part of the estimated cost of a project which can properly be allocated to the preservation and propagation of fish and wildlife, and costs allocated pursuant to such findings shall not be reimbursable. I find that the amount of \$78,000 may be allocated to fish and wildlife. This finding has the concurrence of the Fish and Wildlife Service.

Recent price indexes for the kind of work included in the project indicate that the cost of construction may be approximately \$3,030,000, an increase of about 100 percent over the costs estimated under 1940 conditions. Of this total cost \$600,000 would be allocated or the cost of 4,000 acre-feet of storage to be provided in the Spring Creek Reservoir in excess of present needs on project lands, and will be returned to the United States through later use on other developments in the North Fork River Valley; \$32,000 would be allocated for flood control; and \$78,000 would be allocated to fish and wildlife. Thus, the remainder of \$2,320,000 would be allocated for repayment by the water users on the Paonia project lands. The water users have indicated their willingness to repay \$2.84 per acre per year for water for the Fire Mountain lands and \$1.64 per acre per year for the Leroux Creek lands, over and above the costs of operation and maintenance. This is slightly higher than the repayment ability indicated in the report, but after a careful study, I am convinced that these amounts can be paid. At these rates, the water users would be able to repay a total of \$1,382,800 of the estimated construction costs in a 40-year repayment period, or would be able to repay the allocation of \$2,320,000 in a 68-year period.

The annual benefits-to-costs ratio for this project is estimated at 1.3 to 1, under present day high construction costs, amortized in 50 years, and benefits at prewar price levels over the entire repayment period for the project.

I find that the proposed construction has engineering feasibility; that of the estimated total construction costs of \$3,030,000 at current price levels, \$2,320,000 can properly be allocated to irrigation of the project lands, \$32,000 can properly be allocated to flood control, \$78,000 can properly be allocated to fish and wildlife, and \$600,000 can be allocated to the provision of reserve storage, which can be sold or rented by the United States for use on lands not included in the proposed project; and that no part of the estimated cost can properly be allocated to power, municipal water supply, or other miscellaneous purposes.

I recommend that the Paonia project be authorized for construction in accordance with the plans set forth in the attached report of the regional director dated January 2, 1946, with such modifications as the Commissioner of Reclamation, with your approval, may find proper. I recommend that this authorization be on the basis that the water users be required to repay, during the useful life of the project and at the maximum rates which, in the judgment of the Secretary of the Interior, they may reasonably be expected to meet, that portion of the construction costs of the project which may properly be allocated to them, in addition to

the costs of operation and maintenance, including replacements of project works. Should a comprehensive plan of water resources development in the Colorado River Basin be arrived at, the Paonia project should, of course, be considered as an element of that plan.

I recommend that you adopt this letter as your report on the Paonia project.

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved and adopted May 12, 1947.

(Signed) OSCAR L. CHAPMAN,
Under Secretary of the Interior.

AUTHORIZATION OF PAONIA PROJECT

An act to authorize the construction, operation, and maintenance of the Paonia Federal Reclamation project, Colorado. (Act of June 25, 1947, 61 Stat. 181, Public Law 117, 80th Cong., 1st sess.)

* * * That the Secretary of the Interior through the Bureau of Reclamation is hereby authorized to construct, maintain, and operate, pursuant to the Federal Reclamation laws, the Paonia project, Colorado, substantially in accordance with the report of the regional director of the Bureau of Reclamation, region IV, dated January 2, 1946, as concurred in by the Commissioner of Reclamation and the Secretary of the Interior: *Provided*, That, notwithstanding any recommendations to the contrary contained in said report, all costs allocated to irrigation shall be reimbursable under the Federal Reclamation laws within repayment periods fixed by the Secretary of the Interior at not to exceed sixty-eight years.

SEC. 2. Unexpended balances of sums heretofore appropriated for the Paonia project, Colorado, authorized by finding of feasibility of the Secretary of the Interior approved by the President on March 18, 1939, are hereby made immediately available for expenditure on the Paonia project hereby authorized.

SEC. 3. There are hereby authorized to be appropriated, out of any moneys in the Treasury not otherwise appropriated, such additional sums as may be required for the purposes of this act.

PARKER-DAVIS PROJECT

ARIZONA-CALIFORNIA-NEVADA

The Parker Dam power project was authorized by section 2 of the Rivers and Harbors Act of August 30, 1935 (49 Stat. 1039), and in accordance with the provisions of that act, the President, on January 29, 1936, designated the Secretary of the Interior his agent to construct, operate, and maintain the project.

The Davis Dam project, originally called Bullshead Dam project, was found feasible and authorized by the Secretary on April 26, 1941, under the provisions of the Reclamation Project Act of 1939.

Parker-Davis Project was consolidated from these two projects by Act of Congress on May 28, 1954 (68 Stat. 143, Public Law 373, 83d Cong., 2d sess.).

PARKER DAM AUTHORIZED

[Extract from] An act authorizing the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes. (Act of August 30, 1935, 49 Stat. 1028, 1039-1040, Public Law 409, 74th Cong., 1st sess.)

* * * SEC. 2. That for the purpose of controlling floods, improving navigation, regulating the flow of the streams of the United States, providing for storage and for the delivery of the stored waters thereof, for the reclamation of public lands and Indian reservations, and other beneficial uses, and for the generation of electric energy as a means of financially aiding and assisting such undertakings, the projects known as "Parker Dam" on the Colorado River and "Grand Coulee Dam" on the Columbia River, are hereby authorized and adopted, and all contracts and agreements which have been executed in connection therewith are hereby validated and ratified, and the President, acting through such agents as he may designate, is hereby authorized to construct, operate, and maintain dams, structures, canals, and incidental works necessary to such projects, and in connection therewith to make and enter into any and all necessary contracts including contracts amendatory of or supplemental to those hereby validated and ratified. The construction by the Secretary of the Interior of a dam in and across the Colorado River at or near Head Gate Rock, Arizona, and structures, canals, and incidental works neces-

sary in connection therewith is hereby authorized, and none of the waters, conserved, used, or appropriated under the works hereby authorized shall be charged against the waters allocated to the upper basin by the Colorado River compact, nor shall any priority be established against such upper basin by reason of such conservation, use, or appropriation; nor shall said dam, structures, canals, and works, or any of them, be used as the basis of making any such charge, or establishing any such priority or right, and all contracts between the United States and the users of said water from or by means of said instrumentalities shall provide against the making of any such charge or claim or the establishment of any priority right or claim to any part or share of the water of the Colorado River allocated to the Upper Basin by the Colorado River compact, and all use of said instrumentalities shall be in compliance with the conditions and provisions of said Colorado River compact and the Boulder Canyon Project Act.

THE WHITE HOUSE,
Washington, January 29, 1936.

Hon. HAROLD L. ICKES,
Secretary of the Interior.

MY DEAR MR. SECRETARY: Section 2 of the Act of Congress of August 30, 1935 (Public No. 409, 74th Congress) provides as follows:

SEC. 2. That for the purpose of controlling floods, improving navigations, regulating the flow of the streams of the United States, providing for storage and for the delivery of the stored waters thereof, for the reclamation of public lands and Indian reservations, and other beneficial uses, and for the generation of electric energy as a means of financially aiding and assisting such undertakings, the projects known as "Parker Dam" on the Colorado River and "Grand Coulee Dam" on the Columbia River, are hereby authorized and adopted, and all contracts and agreements which have been executed in connection therewith are hereby validated and ratified, and the President, acting through such agents as he may designate, is hereby authorized to construct, operate, and maintain dams, structures, canals, and incidental works necessary to such projects, and in connection therewith to make and enter into any and all necessary contracts including contracts amendatory of or supplemental to those hereby validated and ratified. The construction by the Secretary of the Interior of a dam in and across the Colorado River at or near Head Gate Rock, Arizona, and structures, canals, and incidental works necessary in connection therewith is hereby authorized, and none of the waters, conserved, used, or appropriated under the works hereby authorized shall be charged against the waters allocated to the upper basin by the Colorado River compact, nor shall any priority be established against such upper basin by reason of such conservation, use, or appropriation; nor shall said dam, structures, canals, and works, or any of them, be used as the basis of making any such charge, or establishing any such priority or right, and all contracts between the United States and the users of said water from or by means of said instrumentalities shall provide against the making of any such charge or claim or the establishment of any priority right or claim to any part or share of the water of the Colorado River allocated to the Upper

Basin by the Colorado River compact, and all use of said instrumentalities shall be in compliance with the conditions and provisions of said Colorado River compact and the Boulder Canyon Project Act.

Under the foregoing provision of law, you, through the Bureau of Reclamation under your jurisdiction, are hereby designated as my agent (1) to construct, operate and maintain dams, structures, canals and incidental works necessary to said Parker Dam and Grand Coulee Dam projects, and (2) in connection therewith to make and enter into any and all necessary contracts including contracts amendatory of or supplemental to those validated under the above-quoted provision of law. Such contracts may be made by you, by the Acting Secretary, by the First Assistant Secretary, by the Under Secretary or by the Assistant Secretary as you may direct, or by such officers of the Bureau of Reclamation as you may designate, and any such contracts made between August 30, 1935 and the date hereof are hereby ratified and any construction work done by or under the Bureau of Reclamation during said period upon said dams, structures, canals and incidental works is hereby adopted.

Sincerely yours,

(Signed) FRANKLIN D. ROOSEVELT,
President.

PARKER DAM POWER FACILITIES

PROVISIONS OF SECOND DEFICIENCY APPROPRIATION ACT, 1939

[Extract from] An act making appropriations to supply deficiencies in certain appropriations for the fiscal year ending June 30, 1939, and for prior fiscal years, to provide supplemental appropriations for the fiscal years ending June 30, 1939, and June 30, 1940, and for other purposes. (Act of May 2, 1939, 53 Stat. 626, 633, Public Law 61, 76th Cong., 1st sess.)

* * * That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, to supply deficiencies in certain appropriations for the fiscal year ending June 30, 1939, and for prior fiscal years, to provide supplemental appropriations for the fiscal years ending June 30, 1939, and June 30, 1940, and for other purposes, namely:

Parker Dam power project, Arizona: For continuation of construction of the Parker power plant, transmission lines, substations, and appurtenant works, fiscal years 1939 and 1940, \$4,000,000, from the general fund of the Treasury, to be repaid from net revenues received under contracts made pursuant to the authority of the act of August 30, 1935 (49 Stat., p. 1039).

DAVIS DAM DIVISION

UNITED STATES DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington, April 7, 1941.

The SECRETARY OF THE INTERIOR.

SIR: In conformity with section 15 of the Boulder Canyon Project Act (45 Stat. 1057), the Bureau of Reclamation has been conducting extensive studies in the Colorado River Basin for the purpose of developing a comprehensive plan for the conservation and utilization of the waters of the main stream and its tributaries. The authorization contemplated that reports should be made from time to time on projects and plans.

Engineers of the Bureau of Reclamation have given special attention this past year to means of refining the general plan for development of the lower section of the Colorado River and of arranging to meet a prospective critical power shortage in the surrounding area. Demands upon the Boulder Dam power plant, even after it has been supplemented by the Parker Dam power plant and plants on the All-American Canal, will be such, owing to normal growth of load and to national-defense requirements, that an additional source of energy will be needed.

The engineering report shows that the situation can be met by construction of the Bullshead Dam project. Features of the project will be Bullshead Dam, an earth and rock-fill structure 338 feet high in the Colorado River about 67 miles below Boulder Dam; Bullshead Reservoir having a capacity of 1,600,000 acre-feet of active storage and extending to the tailrace of the Boulder Dam power plant; Bullshead Dam power plant having an initial installation of 180,000 kilowatts and an ultimate installation of 225,000 kilowatts; transmission lines inter-connecting the Bullshead plant with the Parker Dam power project system and with market centers; and incidental and appurtenant works.

The Bullshead Dam project will serve important multiple purposes. Through reregulation of the flow of the main stream of the Colorado River below Boulder Dam it will contribute to flood reduction, navigation improvement, irrigation and domestic water supplies, power development, silt pollution reduction, recreation, and wild waterfowl protection, as well as other related conservation purposes. The Bullshead Dam will take its place as one of the great series of dams between the Grand Canyon and the point at which the Colorado River flows into Mexico. This series includes Boulder, Bullshead, Parker, Headgate Rock, Imperial, and Laguna

Dams. The series, all Government dams, will develop this section of the river to a maximum for all purposes. Bullshead Dam will contribute in a major way to the development of the lower river for hydroelectric power. Although it serves other purposes as noted, since these purposes have been taken into consideration fully in the allocation of costs of other structures of the series, the entire cost of the Bullshead Dam project should be allocated to power. A prospective service of Bullshead Dam should be noted and emphasized. When an international agreement regarding the division of the waters of the Colorado River between the United States and Mexico is completed, the accurate control which will be provided by Bullshead Dam will be essential to meter out the water to be passed downstream.

The creation of Bullshead Reservoir will enable the outlets at Boulder Dam to be operated for maximum power production in coordination with rapid fluctuations in the production at plants in Southern California and in the demand for power in that area, which the Boulder plant principally serves. The power plant at Bullshead will be coordinated, however, with the Parker plant about 80 miles farther downstream, and will assist in serving the growing demands in southern Nevada, in western and central Arizona, and in south-eastern California. The prospective power requirements of the market area are that 1,334,000,000 kilowatt-hours of energy will be needed annually in the near future. If the Bullshead Dam project is completed in 3 years, it will meet, with the Parker plant and certain small projects that may be developed, these requirements until such time as the Metropolitan Water District of Southern California exercises its right to one-half of the power from Parker Dam.

The cost of the Bullshead Dam project is estimated at \$41,200,000. The cost being allocated to power, it is expected to be repaid in 40 years with interest at 3 percent under section 9 of the Reclamation Project Act of 1939 (53 Stat. 1187). The annual cost of amortizing the project on this basis will be \$1,782,400 and the annual cost of operation and maintenance will be \$380,000. Power rate and demand studies show that at rates comparable with those established for the Parker Dam power project, the energy from the Bullshead Dam project will yield sufficient revenue to guarantee the payment of the charges both for operation and maintenance and for amortization of the project.

The benefits to be derived from the construction of the Bullshead Dam project far exceed the annual costs, and the project clearly meets all the requirements of the Reclamation Project Act of 1939. I recommend, therefore, that you find the project feasible, and that the finding and the report be transmitted to the Congress in compliance with the provisions of the Reclamation Project Act of 1939.

Respectfully,

(Signed) JOHN C. PAGE,
Commissioner.

OFFICE OF THE SECRETARY,
Washington, April 26, 1941.

The SPEAKER OF THE HOUSE OF REPRESENTATIVES.

MY DEAR MR. SPEAKER: There is submitted herewith the reclamation report on the Bullshead¹ Dam project on the Colorado River where that stream forms the boundary between Arizona and Nevada.

The report consists of the letter of April 7, 1941, to me from the Commissioner, Bureau of Reclamation, the engineering and economic report transmitted with that letter, and this, the finding with respect to the feasibility of the project.

The plan for the Bullshead Dam project contemplates the construction of a large dam, a power plant, transmission lines, and incidental and appurtenant works to cost approximately \$41,-200,000. The project will make available ultimately 225,000 kilowatts of electric energy. It will serve through regulation of the river below Boulder Dam to increase the efficiency of the Boulder Dam power plant, and to contribute to flood control, navigation improvement, irrigation and municipal water supplies, power development, reduction of silt pollution, recreation, wild waterfowl protection, and related conservation purposes. It will also prove most useful eventually in metering the water passed downstream for use beyond the boundary of the United States.

The plan of operation contemplates the coordination of water releases from Bullshead Reservoir with releases from Lake Mead, the reservoir created by Boulder Dam, and the coordination of power production at the Bullshead Dam power plant with that of the Parker Dam power plant.

Demands for power are outrunning present means of meeting them in the Southwest. The Bullshead Dam project, with the Parker Dam power project and other smaller developments which may follow, will meet the situation for some years, or until the Metropolitan Water District of Southern California exercises its rights to one-half of the power from the Parker plant.

Owing to the manner in which the Bullshead Dam project fits into the plan for the development of the lower Colorado River, no allocation of costs is made to benefits other than to power. Sales of electric energy are expected to yield revenues to cover the cost of operation and maintenance of the Bullshead Dam project, and to amortize the entire cost of the project in 40 years with interest at 3 percent, thus fulfilling the requirements of the Reclamation Project Act of 1939. The power will be sold at rates comparable with those established for the Parker Dam power project, thus spreading the benefits which follow low-cost power.

¹ On June 26, 1941, Secretary of the Interior Harold L. Ickes named Bullshead Dam "Davis Dam" in honor of Arthur Powell Davis, first Director of the Bureau of Reclamation (at that time the Reclamation Service).

I find that the Bullshead Dam project is feasible as to its construction from an engineering point of view. I find that it will benefit in many ways the region and the people of the region, and that its economic benefits exceed the annual charges. I find that repayment of the entire cost of its construction with interest at 3 percent may confidently be expected within 40 years. The Bullshead Dam project, consequently, is authorized for construction under the provisions of section 9 of the Reclamation Project Act of 1939. Construction should be begun as soon as possible in order to meet a prospective serious power deficiency.

The Director of the Bureau of the Budget has informed me that authorization of the Bullshead Dam project at this time is in accord with the program of the President.

Sincerely yours,

(Signed) E. K. BURLEW,
Acting Secretary of the Interior.

PROVISIONS OF INTERIOR DEPARTMENT APPROPRIATION ACT, 1942

[Extract from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1942, and for other purposes. (Act of June 28, 1941, 55 Stat. 303, 336, Public Law 136, 77th Cong., 1st sess.)

* * * That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, for the Department of the Interior for the fiscal year ending June 30, 1942, namely:

* * * * *

GENERAL FUND, CONSTRUCTION

For commencement and continuation of construction of the following projects and for general investigations and administrative expenses in not to exceed the following amounts, respectively, to be expended from the general fund of the Treasury in the same manner and for the same objects of expenditures as specified for projects included hereinbefore in this act under the caption "Bureau of Reclamation" under the heading "Administrative provisions and limitations," but without regard to the amounts of the limitations therein set forth, to be immediately available, to remain available until expended, and to be reimbursable under the Reclamation law:

Bullshead project, Arizona-Nevada, \$4,000,000, for the purposes and substantially in accordance with the report thereon heretofore submitted under Section nine of the Reclamation Project Act of 1939, and subject to the terms of the Colorado River Compact.

PARKER-DAVIS CONSOLIDATION

An act to consolidate the Parker Dam power project and the Davis Dam project. (Act of May 28, 1954, 68 Stat. 143, Public Law 373, 83d Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the purposes of effecting economies and increased efficiency in the construction, operation, and maintenance thereof and of accounting for the return of reimbursable costs, the Secretary of the Interior is authorized and directed to consolidate and administer as a single project to be known as the Parker-Davis project, Arizona-California-Nevada, the projects known as the Parker Dam power project, Arizona-California, and the Davis Dam project, Arizona-Nevada: Provided, That nothing in this Act shall be construed to alter or affect in any way the Boulder Canyon Project Act (45 Stat. 1057), the Boulder Canyon Project Adjustment Act (54 Stat. 774), or the treaty between the United States of America and the United Mexican States, signed at Washington on February 3, 1944, relating to the utilization of the waters of the Colorado and Tijuana Rivers and of the Rio Grande from Fort Quitman, Texas, to the Gulf of Mexico: Provided further, That nothing in this Act shall be construed to alter or affect in any way any right or obligation of the United States or any other party under contracts heretofore entered into by the United States.

SEC. 2. Funds heretofore appropriated for the Parker Dam power project, Arizona-California, and the Davis Dam project, Arizona-Nevada, shall be consolidated and shall be and remain available for the purposes for which they were appropriated.

PINE RIVER PROJECT

COLORADO

The Pine River project was found feasible by the Secretary on June 17, 1937, and approved by the President on the same day under the provisions of section 4 of the act of June 25, 1910 (36 Stat. 836) and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702).

OFFICE OF THE SECRETARY,
Washington, June 17, 1937.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The following report on the Pine River Reclamation project in the State of Colorado is made to you under the provisions of Section 4 of the Act of June 25, 1910 (36 Stat. 835).

Section 4 of the Act of June 25, 1910 provides in effect that after the date of that act no irrigation project to be constructed under the Act of June 17, 1902 (32 Stat. 388) and acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924, (43 Stat. 701) provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

The Pine River project contemplates the construction of a reservoir with 126,000 acre-feet of active storage capacity on the Pine River, 15 miles above Bayfield, Colorado, to supplement the late summer water supply for 34,000 acres of irrigated white

and Indian lands and to permit the development of 35,000 acres of undeveloped irrigable lands under constructed ditches or minor extensions thereof located in La Plata and Archuleta counties, Colorado, with a small area in San Juan county, New Mexico.

WATER SUPPLY

Pine River has an average annual flow of 300,000 acre-feet, derived principally from the spring melting of snows accumulated during the winter months. The low water flow is inadequate to supply the irrigation requirements for the 34,000 acres of irrigated white and Indian-owned lands along the river. In 1930 a Federal Court decreed the Indians a prior right of 212 second-feet from the Pine River. Expansion of Indian uses is increasing shortages on the white-owned lands and will eventually take all the late summer water.

With stream regulation by storage, a full irrigation supply would be secured for the entire project area in all except occasional years of extremely low runoff when shortages as high as 50% may be anticipated. It would be uneconomical to eliminate such shortages completely. Planting of crops can be curtailed in the rare years of serious shortage, as shortages are apparent in advance of the planting season.

ENGINEERING FEATURES AND CONSTRUCTION COST

The principal construction feature is the Vallecito reservoir to be formed by a dam of the compacted earth embankment type, with a height of 125 feet above streambed and a crest length of 4,000 feet. An open channel spillway, with a capacity of 30,000 second-feet, controlled by three 37' x 19' radial gates is to be provided on the right abutment of the dam. The cost of this dam including right of way and highway relocation around the reservoir site, is estimated as \$3,240,000.

LAND PRICES

Of the total irrigable area of 69,000 acres, 14,000 acres are Indian-owned lands located within the Ute Indian Reservation and the remainder are white-owned lands. The 35,000 acres of undeveloped irrigable lands are covered by sage, pinion, and other desert plants, and are not farmed by reason of inadequate rainfall and lack of dependable late season water supply for irrigation purposes.

The repayment contract with the Irrigation District will provide for appraisal of the privately owned non-Indian lands on the basis of values without irrigation and for sale at the appraised values, to new settlers, of holdings in excess of the areas required for a family, with a maximum of 160 acres. Settlers on the small area of public lands will be required to have some capital and farming experience.

ADAPTABILITY OF LAND TO SETTLEMENT AND FARM HOMES

The land embraced in the project is of average fertility. Rough land and poor soil have been eliminated. The retained land can easily be prepared for the effective application of water. If properly prepared for irrigation and properly cultivated, good yields of all crops grown in this locality are assured. With care in the selection of new settlers, and with farms suitably improved and equipped, success in farming may be anticipated.

PROBABLE RETURN TO RECLAMATION FUND OF COST OF CONSTRUCTION

A finding is required that the cost of construction will probably be returned to the Reclamation Fund. This is interpreted to mean that it will be returned within the maximum period fixed by Reclamation Law, which is 40 years from the time the public notice that the works are completed, is issued by the Secretary. It is anticipated that at least 10% of the capacity and cost of the reservoir will be allocated to the Indians, leaving about \$3,000,000 to be repaid by 55,000 acres of white-owned lands.

The construction costs of the project will vary with the amount of storage capacity allotted to each acre of project lands, but the average will probably be about \$55 per acre for white-owned lands, making the average yearly payment \$1.38 an acre. The additional annual cost for operation and maintenance of the reservoir and for distribution of stored water will average about \$0.22 per acre, making total average payment of about \$1.60 per acre annually. This charge should not prove burdensome.

FINDING REGARDING FEASIBILITY OF PROJECT

The foregoing data justify the conclusion that the project is feasible from an engineering and economic standpoint, and I accordingly so find and declare.

Because of the urgent need of providing a supplemental water supply for the developed lands to prevent abandonment of lands outside of the Indian reservation because of growing shortages, I recommend that construction of the Pine River project be approved.

Sincerely yours,

(Signed) CHARLES WEST,
Acting Secretary of the Interior.

Approved June 17, 1937.

(Signed) FRANKLIN D. ROOSEVELT,
President.

An act to authorize the Secretary of the Interior to execute an amendatory repayment contract with the Pine River Irrigation District, Colorado, and for other purposes. (Act of July 27, 1954, 68 Stat. 534, Public Law 533, 83d Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the reimbursable construction cost of the Pine River reclamation project, Colorado, is hereby fixed at \$1,500,000, and the Secretary of the Interior is authorized to execute, on behalf of the United States, the amendatory repayment contract negotiated pursuant to section 7 of the Reclamation Project Act of 1939 (53 Stat. 1187, 1192) and approved at an election of the district held November 30, 1953, under which contract the unpaid balance of five-sixths of the reimbursable construction cost of the Pine River project (the remaining one-sixth being properly chargeable to the lands of the Pine River Indian (Southern Ute) project as set out in a memorandum of understanding between the Bureau of Reclamation and the Bureau of Indian Affairs dated January 3, 1940) is repayable by the district in thirty fixed annual installments or, if the district elects to use a variable payment formula as set forth in said contract, in as many installments as may be required to return the portion of the aforesaid balance then remaining unpaid.

PRESTON BENCH PROJECT

IDAHO

The Secretary's report on the Preston Bench project was transmitted to the President on March 5, 1948, under the provisions of the Reclamation Project Act of 1939, and construction of the project was authorized by the act of June 15, 1948 (62 Stat. 442).

BUREAU OF RECLAMATION, REGION IV,
Salt Lake City, Utah, September 15, 1947.

To: Commissioner, Bureau of Reclamation
From: Regional Director, Salt Lake City, Utah
Subject: Preston Bench Project, Idaho.

1. Submitted herein is my report on the potential Preston Bench project. Supporting information in detail is presented in Appendix I attached hereto. This comparatively simple irrigation project has been planned to replace an old, privately constructed canal serving a highly developed irrigated area of about 4,000 acres near Preston, Idaho. The existing canal is now gravely threatened by landslides, and financial disaster for the farmers served by the canal may be expected unless a new canal is constructed within the near future. The Preston Bench project would consist of a new 15.6-mile canal in an entirely different location and on stable terrain, a 1,280-foot tunnel, and appurtenant structures. I urgently recommend that this report be given immediate departmental consideration with a view of securing Congressional authorization for very early construction of the project.

* * * * *

NEED FOR PRESTON BENCH PROJECT

17. Preston Bench, although now an excellent agricultural area, needs further development of water resources for irrigation purposes. Low stream flows in the summer and early fall do not provide full water supplies for a large part of the irrigated area, and some additional areas cannot be irrigated because of lack of water. The Glendale Reservoir on Worm Creek affords very beneficial storage of water for irrigation use, but additional storage

is needed. Means of providing additional storage through enlargement of the Glendale Reservoir and construction of the Mapleton Dam on Cub River are being investigated by the Bureau of Reclamation. The most urgent need in the area, however, is for construction of a new canal in a more favorable location, as outlined in paragraph 27, to replace the main canal conveying water from Mink Creek to Preston Bench and serving the farms under the Preston, Riverdale, and Mink Creek Canal Company.

* * * * *

PLAN FOR PRESTON BENCH PROJECT

27. Construction of the Preston Bench project consisting of the Mink Creek canal, extending from Mink Creek to Worm Creek, and the Station Creek tunnel has been planned by the Bureau of Reclamation to provide a dependable water supply for the Preston Bench lands under the present Preston, Riverdale, and Mink Creek canal. The Mink Creek canal and the Station Creek tunnel are shown on a map comprising the frontispiece of this report. The canal would have a capacity of 36 second-feet and would be about 15.6 miles in length. The canal would follow an alinement completely different than that of the existing Preston, Riverdale, and Mink Creek canal, and would be on stable terrain not subject to landslides or conducive to high maintenance and repair costs. The Station Creek tunnel would be excavated through a divide between Mink Creek and Worm Creek and would be about 1,280 feet in length. The estimated construction cost of the canal, appurtenant structures, and the tunnel at April 1947 prices is \$431,000. No requirement for drainage of farm land in connection with the project can be foreseen but suitable drainage works at a comparatively small cost (in addition to the cost of the canal, appurtenant structures, and tunnel estimated at \$431,000) would be constructed as part of the project if found necessary in the future. Further reference to possible drainage, and repayment of the cost thereof, is made in paragraph 37.

* * * * *

BENEFITS OF THE PROJECT

* * * * *

34. All of the benefits provided by the Preston Bench project would be basically agricultural in that they would stem either directly or indirectly from the preservation of agricultural production, and from a slight increase in agricultural production. The project would not involve any power production, municipal or industrial water supplies, flood control, silt control, river transportation, or recreation, and would have little effect on fish and wildlife. The over-all agricultural benefits of irrigation (including the direct economic values accruing from agricultural production and income and also the indirect public benefits which are

essentially the fostering of industry, commerce, settlement, employment, and welfare) have commonly been measured by the value of the crops attributable to irrigation. The agricultural benefits of the Preston Bench project, evaluated according to this method and based on average prices for the 1939-1944 period, are shown as follows. Also shown is a comparison of the evaluated benefits with the estimated construction cost of the project and related works as based on prices of April 1947.

Evaluated annual agricultural benefits:

Preservation of present water supply—3,925 acre-feet providing crop production valued at \$15.20 an acre-foot....	\$59,600
Increase in water supply—920 acre-feet providing crop production valued at \$15.20 an acre-foot.....	14,000

Total evaluated annual benefits.....	73,600
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Estimated annual costs:

Amortization of total construction cost (\$461,000, including \$431,000 for the project works and \$30,000 for the related works) in 74 years at 3 percent....	15,600 ¹
Operation, maintenance, and replacement of project works, related works, and existing distribution system in the project service area.....	5,000

Total estimated annual costs.....	20,600
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Ratio of evaluated benefits to estimated costs:.....	3.6 to 1
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* * * * *

REIMBURSEMENT OF PROJECT COST

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36. For the dependable water supply provided by the project, the Preston, Riverdale, and Mink Creek Canal Company could make annual payments to the Government averaging \$7,100, with prices of agricultural products such as the average for the 1939-1944 period, after paying annual operation, maintenance, and replacement expenses estimated as follows: (1) \$5,000 for the project works, related works, and the company's existing distribution system on Preston Bench and (2) \$1,000 for the existing works that would remain in use to supply water for lands in Mink Creek Valley and the Riverdale area as mentioned in paragraph 28. With average annual installments of \$7,100 on the project cost estimated at \$453,000 on the basis of April 1947 prices (\$431,000 for construction and \$22,000 for investigations and surveys), the company could repay the entire project cost in about 64 years without interest, exclusive of the 10-year period in which repayment would be deferred. If, as a result of an increase in construction prices, the cost of the project should be more than \$453,000, or if average agricultural prices during the repayment period

¹ Annual amortization cost of \$15,600 is on the basis of the minimum repayment period of 74 years (including the first 10 years during which project repayment would be deferred) as outlined in paragraph 36. If based on the useful life of the project, which would very likely be far more than 74 years, the annual amortization cost would be less than \$15,600 and the ratio of benefits to costs would be greater.

should fall below the 1939-1944 average, the company would require more than 64 years to repay the entire project cost.

* * * * *

CONCLUSIONS

* * * * *

39. Construction of the Preston Bench project is urgently needed to avert the loss of a valuable water supply for an excellent farming area near Preston, Idaho, and to avoid financial disaster for the farmers. The Preston Bench project as outlined in this report offers the most practicable means of preserving the water supply in this area. The benefits obtainable from the project through preservation of the water supply, and agricultural production and wealth dependent thereon, are far greater than the estimated cost of the project. The project has engineering feasibility, and full repayment of the project cost is in prospect.

RECOMMENDATIONS

40. As a result of high construction prices at present, the estimated construction cost of the Preston Bench project is higher than desirable, and the period required for repayment of the project cost is unusually long. In view of the present precarious water supply situation for the Preston Bench lands, however, the irrigators and the Nation cannot afford to defer construction of the project until construction prices are more moderate. I therefore recommend:

(a) That the following principal works, and such subsidiary works as may be incidental thereto, which constitute the Preston Bench project, be authorized to be constructed by the Bureau of Reclamation substantially in accordance with the plan set forth in this report, with such modifications, omissions, or additions as the Commissioner of Reclamation, with the approval of the Secretary of the Interior, may find proper for carrying out the project to the end of providing a dependable water supply for irrigation of approximately 4,050 acres of land near Preston, Idaho, as indicated in this report, to wit:

- (1) Mink Creek canal
- (2) Station Creek tunnel
- (3) Such drainage works as may be required

(b) That said Preston Bench project be authorized to be constructed, operated, and maintained in accordance with the Federal Reclamation laws (Act of June 17, 1902, 32 Stat. 388, and acts amendatory thereof or supplementary thereto, including legislation for authorization of said project).

(c) That the total cost of said Preston Bench project be allocated for repayment by the water users to be served by the project, with repayment to be made in accordance with terms and conditions specified by the Secretary of the Interior upon

consideration of (1) the repayment ability of the water users as estimated in paragraph 36 of this report, (2) the present and prospective non-project obligations of the water users as outlined in paragraph 35 of this report, and (3) any future changes in construction prices that may affect the cost of the project.

(Signed) E. O. LARSON,
Regional Director.

BUREAU OF RECLAMATION,
Washington, March 3, 1948.

The SECRETARY OF THE INTERIOR.

SIR: Transmitted herewith is my report on the Preston Bench Project, Idaho.

In your behalf, copies of the report which you adopted on January 2, 1948, as your proposed report were submitted to the affected States and to the Secretary of the Army for comment in accordance with the Act of December 22, 1944, (58 Stat. 887), and to the Idaho Department of Fish and Game in accordance with provisions of the Act of August 14, 1946 (60 Stat. 1080). The letters of comment received therefrom are attached as are those also from the Departments of Agriculture and Commerce and from the Federal Power Commission. No comments, views, or recommendations received are adverse to the project. The Governor of Idaho states that it appears to be of vital importance that early relief be afforded the Preston Bench area through construction of the project.

Under these circumstances, I recommend that you adopt the report which you approved on January 2, 1948, as your final report, and that you transmit it to the President and to the Congress in accordance with Reclamation Law.

Respectfully yours,

(Signed) KENNETH MARKWELL,
Acting Commissioner.

OFFICE OF THE SECRETARY,
Washington, March 5, 1948.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: My report on the Preston Bench Project, Idaho, is transmitted herewith to you pursuant to Sec-

tion 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187). I propose the construction of a new canal and related works to replace an existing irrigation canal that is subject to periodic damage from landslides along the Bear River in the vicinity of Preston, Idaho.

The plan for the project has been prepared under the sponsorship of the Bureau of Reclamation, and the report has been reviewed by the States of Idaho, Utah, and Wyoming, and by the Secretary of the Army to whom it was sent in accordance with the requirements of Section 1 of the Act of December 22, 1944 (58 Stat. 887), and by the Departments of Commerce and Agriculture, and Federal Power Commission. None of their comments is adverse to the project. Governor Robins of Idaho states that it is vitally important that early relief be afforded the project area. The Idaho Department of Fish and Game also has reviewed the report in accordance with provisions of the Act of August 14, 1946 (60 Stat. 1080) and recommends favorable action. Copies of these letters of comment are transmitted herewith.

I shall appreciate having your advice concerning the relation of this proposed project to your program before I transmit the report to the Congress for its consideration and appropriate action in accordance with the provisions of the Reclamation Project Act of 1939. Because of the emergency nature of the proposed works, I would appreciate receiving an early reply.

Sincerely yours,

(Signed) J. A. KRUG,
Secretary of the Interior.

PRESTON BENCH PROJECT AUTHORIZATION

An act to authorize the Secretary of the Interior to construct the Preston Bench project, Idaho, in accordance with the Federal reclamation laws. (Act of June 15, 1948, 62 Stat. 442, Public Law 644, 80th Cong., 2d sess.)

* * * That the Secretary of the Interior through the Bureau of Reclamation is hereby authorized to construct, maintain, and operate, pursuant to the Federal reclamation laws, the Preston Bench project, Idaho, substantially in accordance with the report of the regional director of the Bureau of Reclamation, region IV, dated September 15, 1947, as concurred in by the Commissioner of Reclamation and the Secretary of the Interior: *Provided*, That the total cost of the project shall be reimbursable under the Federal reclamation laws within repayment periods fixed by the Secretary of the Interior at not to exceed seventy-four years.

SEC. 2. There are hereby authorized to be appropriated, out of any moneys in the Treasury not otherwise appropriated, such sums as may be required for the purposes of this Act.

PROVO RIVER PROJECT

UTAH

The Provo River project ¹ was found feasible by the Secretary on November 13, 1935, and approved by the President on November 16, 1935, pursuant to section 4 of the act of June 25, 1910 (36 Stat. 836) and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702).

The Salt Lake Aqueduct was found feasible by the Secretary on October 21, 1938, and approved by the President on October 24, 1938, pursuant to the above acts.

The Deer Creek Power Plant was authorized by the Secretary on August 20, 1951.

OFFICE OF THE SECRETARY,
Washington, November 13, 1935.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The Supreme Court of the United States in the Parker Dam decision (*United States v. State of Arizona*, 295 U. S. 174) indicated that Section 4 of the Act of June 25, 1910 (36 Stat., 835) is applicable to irrigation projects constructed under the National Industrial Recovery Act, and this report upon the Provo River project, Utah, is made to you under said statute of 1910 and under subsection B of Section 4 of the Act of December 5, 1924 (43 Stat., 701).

Section 4 of the Act of June 25, 1910, provides, in effect, that after the date of that act no irrigation project to be constructed under the Act of June 17, 1902 (32 Stat., 388), and acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924 (43 Stat., 701), provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering

¹ The *Provo River Project* was initiated under the provisions of the National Industrial Recovery Act of 1933.

features, the cost of construction, land prices and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

Under date of November 16, 1933, an allotment of \$1,000,000 was made available under the Act of June 16, 1933, and under date of August 14, 1935, you approved an allotment of \$2,260,000 under the Emergency Relief Act of April 8, 1935, to start the construction of the Provo River project, consisting of two divisions, known respectively as the Deer Creek division and the Utah Lake Division.

The water to be developed by the project will be used for the purpose of furnishing a supplemental supply for approximately 85,000 acres of irrigated land of which 35,000 acres are under the Deer Creek Division and 50,000 acres under the Utah Lake Division. The lands to be so furnished with a supplemental supply of water are located in the general vicinity of the Cities of Provo, Pleasant Grove, Lehi, American Fork, Magna and Salt Lake City. In addition to the water furnished for supplemental irrigation, about 50,000 acre feet annually will be furnished for municipal, industrial and miscellaneous purposes, including some irrigation, from the Deer Creek Division and about 30,000 acre feet annually from the Utah Lake Division. The furnishing of water for municipal, industrial and miscellaneous purposes is necessary in order to avoid the further encroachment, for these purposes, on the present irrigation supply for farm lands.

The furnishing of supplemental water for project lands and for municipal and industrial purposes from the Deer Creek Division will be accomplished by the construction of the following principal features:

(a) The Deer Creek Reservoir on the Provo River, with an estimated total storage capacity of 170,000 acre feet, and an estimated annual yield of 100,000 acre feet of water;

(b) The Duchesne Tunnel, with a length of approximately 5.54 miles and a capacity of approximately 325 second feet;

(c) The enlargement of the Weber-Provo Diversion Canal constructed some years ago by the United States as part of the first division of the Salt Lake Basin project;

(d) The enlargement of a privately owned canal known as the Provo Reservoir Canal for a distance of about 23 miles to a capacity of 400 to 600 second feet, or the enlargement and extension of another privately owned canal known as the Big Bench and North Union Canal in the event it is determined that this latter canal enlargement and extension is more desirable than the enlargement of the Provo Reservoir Canal;

(e) Other works of lesser importance.

The furnishing of supplemental water for project lands and for municipal and industrial purposes from the Utah Lake Division will be accomplished by the construction of the following principal features:

(a) A dike across the southern portion of Utah Lake about 5½ miles long, with a crest elevation of about 8 feet above what is known as compromise level of Utah Lake, together with a spillway and pumping plant;

(b) The enlargement and revision of the channel of the Jordan River

between Utah Lake and Jordan Narrows so that when enlarged and revised the channel will have a capacity of about 1800 second feet.

(c) Other works of lesser importance.

Both divisions of the project cover old established communities and the development of additional water as contemplated by the project is badly needed.

Studies and investigations by the Bureau of Reclamation indicate that the water supply is adequate for the purpose intended, that the construction of both divisions is feasible from an engineering standpoint and that the project can be completed at a cost of \$9,974,000.

I find that the project is feasible, that the lands to be furnished with a needed supplemental supply of water are adaptable for actual settlement and farm homes, and that the project will probably return the cost thereof to the United States. Under the present circumstances there is little likelihood of the development occasioning a rise in the price of the irrigated land accompanied by sales on time to newcomers, to the ultimate detriment of the project.

I recommend that the Provo River project, consisting of the Deer Creek Division and the Utah Lake Division, be approved, and that authority be issued to this Department to proceed with the work and to make contracts and take any necessary action for the construction of said project or either division thereof.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved November 16, 1935.

(Signed) FRANKLIN D. ROOSEVELT,
President.

SALT LAKE AQUEDUCT

OFFICE OF THE SECRETARY,
Washington, October 21, 1938.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: This report upon the Salt Lake aqueduct, a part of the Provo River Project, Utah, now under construction, is made to you in pursuance of Section 4 of the Act of June 25, 1910 (36 Stat. 835), and under Subsection B of Section 4 of the Act of December 5, 1924 (43 Stat. 701).

Section 4 of the Act of June 25, 1910, provides, in effect, that after the date of that act no irrigation project to be constructed under the Act of June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto shall be undertaken unless

and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924, (43 Stat. 701) provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

Under date of November 16, 1935, you approved the finding of feasibility for the Provo River Project, this finding being concerned primarily with the Deer Creek and Utah Lake Divisions, as sufficient information was not then available to include the aqueduct. The Deer Creek Division is now under construction with an estimated cost of \$7,600,000, and with the major features comprising the Deer Creek reservoir on the Provo River, a transmountain tunnel to bring Duchesne River waters to Provo River, a short canal to divert surplus Weber River waters to Provo River, and enlargement of the major distribution canal leading from Provo River northward through the irrigated lands. The Provo River Water Users' Association has contracted with the Government to repay the cost of the works above described. The 1935 finding of feasibility of the Provo River Project, Utah, reads in part, as follows:

In addition to the water furnished for supplemental irrigation, about 50,000 acre-feet annually will be furnished for municipal, industrial and miscellaneous purposes, including some irrigation, from the Deer Creek Division and about 30,000 acre-feet annually from the Utah Lake Division. The furnishing of water for municipal, industrial and miscellaneous purposes is necessary in order to avoid the further encroachment, for these purposes, upon the present irrigation supply for farm lands.

All of the engineering features mentioned in the preceding paragraph, excluding the enlargement of the Provo River canal, are closely associated with the water supply for the aqueduct.

The Metropolitan Water District of Salt Lake has been formed to underwrite the construction of the aqueduct to convey project waters from Deer Creek Reservoir to Salt Lake City, serving enroute some small towns, together with approximately 10,000 acres of suburban irrigable lands adjacent to Salt Lake City which are badly in need of additional water. The District has subscribed to 46 percent of the capital stock of the Provo River Water Users' Association, entitling the District to that part of the project water supply, and desires that the construction be promptly undertaken by the Bureau of Reclamation.

The Metropolitan Water District of Provo has subscribed to 8,000 shares in the Provo Water Users' Association and is in the same situation as the Metropolitan Water District of Salt Lake, in that it is organized so as to serve both the municipal water

needs of Provo City and the irrigation needs of lands adjacent to the municipality. The first ten miles of the aqueduct feasibly can be designed and constructed to serve both the Provo and Salt Lake districts. If the Provo district desires so to be served, appropriate contract arrangements will be made.

The Metropolitan Water District of Salt Lake has a population of approximately 175,000 people, and includes properties with an assessed valuation of approximately \$250,000,000. The Metropolitan Water District of Provo has a population of approximately 15,000 people with a proportionate assessed valuation.

The aqueduct will have an average capacity of 160 second-feet and a length of 41 miles from the Deer Creek Dam on Provo River to the present regulatory reservoirs in Salt Lake City. The construction cost thereof is estimated at \$5,800,000.

Studies and investigations by the Bureau of Reclamation indicate that the water supply to be secured is adequate for the purposes intended and that the construction of the aqueduct is feasible from an engineering standpoint.

I find that the Provo River Project, including the aqueduct, is feasible to construct, that the lands to be furnished with a needed supplemental supply of water are adapted for actual settlement, for intensive farming, and suburban homes, and that the project will return the cost thereof to the United States. I therefore recommend that authority be issued this Department to proceed with construction of the Salt Lake aqueduct as a part of the Provo River Project.

Sincerely yours,

(Signed) HARRY SLATTERY,
Acting Secretary of the Interior.

Approved October 24, 1938.

(Signed) FRANKLIN D. ROOSEVELT,
President.

DEER CREEK AND AQUEDUCT DIVISIONS

An act to provide a means for the orderly continuation and completion of the Deer Creek and Aqueduct divisions of the Provo River project, Utah. (Act of March 29, 1948, 62 Stat. 92, Public Law 462, 80th Cong., 2d sess.)

* * * That, in order to provide a means for the orderly continuation and completion of the Deer Creek and Aqueduct divisions of the Provo River project, Utah, and for the recovery by the United States of the actual construction cost thereof, the Secretary of the Interior in proceeding with the construction, completion, and administration of said divisions heretofore authorized, subject to the execution of such contracts as the Secretary may deem necessary to maintain existing repayment contracts between the United States, the Provo River Water Users Association and the Metropolitan Water District of Salt Lake City consistent with the interim construction cost recovery plan herein provided, is au-

thorized (a) to deliver water or make project works available therefor, as the case may be, on terms and at annual rates or other annual charges to be fixed by the Secretary from year to year, calculated to return to the United States (in addition to the cost of operation and maintenance) the actual cost in excess of existing repayment contract liability that may be incurred by the United States in completing said divisions of the Provo River project; and (b) to postpone the commencement of annual construction charge installments under existing repayment contracts: *Provided*, That any such postponement of annual construction charge installments shall in no event operate to delay the commencement of construction charges, as provided by existing repayment contracts, beyond the time when costs that may be incurred by the United States in excess of existing contract liability have been returned to the United States.

DEER CREEK POWER PLANT

BUREAU OF RECLAMATION,
Washington 25, D. C., August 2, 1951.

THE SECRETARY OF THE INTERIOR.

SIR: This is my report on the feasibility of installation of the Deer Creek power plant and appurtenant facilities as supplemental works to the Deer Creek Division, Provo River project, Utah. My report is based on and includes the attached report of the Regional Director of the Bureau of Reclamation, entitled "Deer Creek power plant, Deer Creek Division, Provo River project, Utah," dated June 1951.

The Provo River project is located south of Salt Lake City extending as far as Provo, Utah. Consisting of the Deer Creek and Aqueduct Divisions, the project provides substantially for the diversion of water from neighboring watersheds for storage in Deer Creek Reservoir on the Provo River and ultimate delivery to approximately 46,000 acres of lands needing supplemental water in Utah, Salt Lake, Summit, and Wasatch Counties. The project also furnishes domestic water to the Metropolitan Water Districts of Salt Lake City, Provo, Orem, Pleasant Grove-Lindon, American Fork, and Lehi. The Regional Director recommends the immediate construction of a hydroelectric power plant with an installed capacity of 7,000 kilowatts at the Deer Creek Dam to utilize water releases made to meet downstream requirements. The Deer Creek power plant was contemplated as a part of the original project plan and the power plant substructure and penstock facilities have already been constructed. A power plant constructed and operated at the Deer Creek Dam would have no adverse effect on the irriga-

tion features of the Provo River project and would involve no change in water requirements.

The Deer Creek power plant is essential to permit the full feasible operation of the project as planned, and to replace energy and capacity lost by diversion of Weber River water to the Provo River project. The proposed plant would generate an average of 25,000,000 kilowatt-hours annually under present conditions. This energy is urgently needed in the project power market area. The power demand in the project power market area for the year 1947 totaled 349,000 kilowatts. Conservative estimates made by the Bureau of Reclamation and the Federal Power Commission anticipate that the 1960 power demands of the project power market area will be about 745,000 kilowatts.

The estimated cost of the proposed power plant and appurtenant facilities is \$1,400,000. Cost of operation and maintenance including a reserve for replacements is estimated to be \$34,500 annually. The net annual revenues are sufficient to repay the estimated construction cost of \$1,400,000 and, in addition, within a 50-year period, will make available about \$1,623,000 for repayment of costs of the Deer Creek Division of the Provo River project.

Article 38 of the repayment contract, dated June 27, 1936, between the United States and the Provo River Water Users' Association for the Deer Creek Division, Provo River project, provides that net power revenues will be applied to "construction charges due or to become due without regard (unless otherwise directed by law) to any deferment legislation pertaining to such construction charges until all obligations of the association to the United States shall have been liquidated."

I find that the proposed Deer Creek power plant has engineering feasibility; that the estimated costs are properly chargeable to commercial power production; and that these costs will probably be returned to the United States by the power revenues from the sale of the power produced. I find, further, that these works, being entirely for power production and having no effect on irrigation, are not works for irrigation and purposes incidental thereto within the meaning of subsection 1 (c) of the Flood Control Act of December 22, 1944 (58 Stat. 887). Therefore, it follows that upon your approval of this report and submission of it to the President and to the Congress, the proposed works will be authorized under the provisions of section 9 of the Reclamation Project Act of 1939.

I recommend that you approve and adopt this report and the findings herein made, thereby authorizing construction of the Deer Creek power plant in accordance with the plan proposed herein, and that you submit the report to the President and to the Congress.

(Signed) WESLEY R. NELSON,
Acting Commissioner.

Approved and adopted: August 20, 1951.

(Signed) R. D. SEARLES,
Acting Secretary of the Interior.

UNITED STATES DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., August 20, 1951.

THE PRESIDENT,
The White House.
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: There is enclosed a copy of a report to me from the Acting Commissioner of Reclamation with an accompanying report on the feasibility of the installation of the Deer Creek Power Plant and appurtenant facilities as supplemental works to the Deer Creek Division, Provo River Project, Utah, prepared pursuant to the provisions of Section 9 of the Reclamation Project Act of 1939.

I have approved and adopted the attached report and the accompanying findings. Consequently, the installation of the Deer Creek Power Plant and appurtenant facilities is authorized under the provisions of Section 9(a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

Unless you have objection, this report will be transmitted to the Congress in accordance with the provisions of the Reclamation Project Act of 1939.

Sincerely yours,

(Signed) R. D. SEARLES,
(Acting) Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington 25, D. C., August 21, 1952.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This will acknowledge a letter of August 20, 1951, from Acting Secretary of the Interior Richard D. Searles to the President enclosing a report on the Deer Creek power plant and appurtenant facilities as supplemental works to the Deer Creek Division, Provo River project, Utah. He has approved and adopted the report and accompanying findings and states the installation of the Deer Creek power plant and appurtenant facilities is authorized under the provisions of Sec. 9 (a) of the Reclamation Project Act of 1939.

* * * * *

Our review of the report indicates that the project has engineering feasibility and that a benefit-cost ratio of more than unity probably will be achieved even though there may be some question

in light of the Federal Power Commission comment that it may not be possible to sell power at the anticipated rate included in the report, particularly if the value of the winter power generation is included in the benefits.

Subject to your consideration of the above comments on the use of the 100-year amortization period and the use of the interest component, there would be no objection to transmitting your report to the Congress.

It will be appreciated if you will transmit a copy of this letter with your report.

Sincerely yours,

(Signed) F. J. LAWTON,
Director.

UNITED STATES DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., September 10, 1952.

Hon. SAM RAYBURN,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: In accordance with the requirements of Section 9 of the Reclamation Project Act of 1939, there are transmitted herewith a report and findings on the feasibility of the installation of the Deer Creek Power Plant and appurtenant facilities as supplemental works to the Deer Creek Division, Provo River Project, Utah.

On August 20, 1951, the report and findings were transmitted to the President. The Director of the Bureau of the Budget, by letter dated August 21, 1952, has advised that there would be no objection to the submission of the report to the Congress. A copy of Budget Director Lawton's letter is enclosed.

Copies of the report were transmitted to other agencies represented on the Federal Inter-Agency River Basin Committee and copies of the comments received from the Chief of Engineers, Department of the Army, and from the Acting Chairman of the Federal Power Commission are enclosed. No other comments have been received.

With the transmittal of the report and findings to the Congress, the requirements of Section 9 (a) of the Reclamation Project Act of 1939 have been fulfilled, and the installation of the Deer Creek Power Plant and appurtenant facilities as supplemental works to the Deer Creek Division, Provo River Project, Utah, is authorized.

Sincerely yours,

(Signed) VERNON D. NORTHRUP,
Acting Secretary of the Interior.

Identical letter to: Hon. Alben W. Barkley, President of the Senate.

RAPID VALLEY PROJECT

SOUTH DAKOTA

Construction of the Rapid Valley project was recommended by the Secretary on October 2, 1939, and approved by the President on November 8, 1939, under the terms of the act of May 10, 1939 (53 Stat. 685, 719). Allocations under that act were rescinded in part and the project was reauthorized by the President on October 25, 1940, pursuant to the act of August 11, 1939 (53 Stat. 1418). A revised plan for the construction of the project was recommended by the Secretary on February 20, 1942, and approved by the President on June 5, 1942. Revised findings of the Secretary dated October 5, 1943, were approved by the President on November 22, 1943.

Supplemental storage was authorized as part of the Missouri River Basin project under the terms of the Flood Control Act of 1944.

OFFICE OF THE SECRETARY,
Washington, October 2, 1939.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: The Interior Department Appropriation Act, 1940, contained an item of \$5,000,000 from which allocation may be made by you:

For construction in addition to labor and materials to be supplied by the Works Progress Administration, of Water Conservation and Utilization projects, * * * in the Great Plains and arid and semi-arid areas of the United States, * * *

All expenditures from the appropriation and as much of the expenditures from the Work Projects Administration fund as the President determines are to be considered reimbursable. Hereinafter the appropriation item will be termed the "1940 Water Conservation Appropriation."

The Rapid Valley project on the edge of the Black Hills in

the western part of South Dakota is recommended for construction by the Northern Great Plains Committee, in its report to you which was released for publication in October, 1938. I concur in this recommendation and request that an allotment of \$980,000 be made from the appropriation item mentioned above to be considered as a reimbursable portion of the construction cost.

The lands of the project, comprising 12,000 acres, are located along Rapid Creek in Pennington County and extend downstream from Rapid City to Farmdale. The area has been irrigated for the past thirty years or more by eleven canals which divert water directly from Rapid Creek. In nearly all years the stream flow is inadequate after the passing of the spring floods and, as a consequence, it is only practicable to raise the native hay or other early maturing plants, although the soil and climate are adapted to the growing of a large variety of crops. A supplemental supply of irrigation water would provide protection from drought and permit more diversified farming, thus stabilizing the agricultural industry in this community.

State Highway No. 40 and a branch line of the Chicago, Milwaukee, St. Paul & Pacific Railroad pass through the project lands. Transportation facilities are generally good and Rapid City furnishes a market and distribution facilities. The area is well developed and improved. A considerable number of the holdings of irrigable lands are large and these should be subdivided into tracts containing not more than 160 acres of irrigable land.

Rapid City, an important commercial and recreational center of the Black Hills region, is in urgent need of an additional water supply for its present population of 12,000 people and to meet the rapidly increasing demand as the city expands both in area and in population.

Storage of water to meet the need of the agricultural lands and the city can be provided by the construction of an earth and rockfill dam 157 feet in maximum height and 1,100 feet in crest length, at the Pactola site on Rapid Creek, fifteen miles upstream from Rapid City. The reservoir formed by the dam would have a capacity of 40,000 acre-feet, 10,000 acre-feet of which would be reserved for municipal supply and the remainder allocated to the project lands. The reservoir would also provide considerable flood control if properly operated.

The estimated cost of the dam, reservoir, and appurtenant features, the only engineering works to be constructed under this program, is \$2,470,000, which includes \$350,000 for the relocation of a railroad line. Of the total amount, at least \$980,000 can be repaid by the municipality and the landowners, in accordance with the provisions of the Water Conservation Appropriation item, and should be obtained from the said appropriation. The remainder, or \$1,490,000, needed for construction, is expected to be secured from the Work Projects Administration. Most or all of this latter amount cannot be repaid without undue burden. The estimate of expenditures from Work Projects Administration funds is based on the experience of the Bureau of Reclamation on construction with relief forces under the legislative provisions in effect prior to the fiscal year 1940. The efficiency with

which the work can be conducted under the new Work Projects Administration Act is unknown. Therefore, the estimate of required Work Projects Administration funds may need revision at some later date. A subsidy for the flood control benefits is not recommended, as the subsidy provided by the Work Projects Administration funds would appear to be ample recognition by the Federal Government of its generally accepted flood control obligations. A tabulation, giving an estimated breakdown of expenditures, is attached.

Repayments of construction charges are planned to be obtained through contracts with Rapid City and with an association of the various ditch companies. It is proposed that the city shall be obligated to pay one-half of the reimbursable costs, not exceeding \$500,000. City officials have indicated their willingness to pay up to this amount for a supply of dependable water. The unsatisfactory situation in South Dakota with respect to irrigation rights and a lack of adjudication on Rapid Creek make it desirable that the sale of the agricultural water be to an association of the various ditch organizations to the end that the natural flow and stored waters will be properly delivered in accordance with the water rights as established by various water suits in the nature of partial adjudications. To be effective, the association must include all or substantially all of the diverters in Rapid Creek Valley. The cost of irrigation water is planned to be established at one dollar per acre-foot per annum, with a minimum annual payment by the association sufficient to meet the provisions for reimbursability contained in the Water Conservation Appropriation item.

The operation of the reservoir should be conducted by a representative of the Federal Government in order that its operation will result in flood control to the largest practicable degree and in order to avoid friction, so far as possible between the city and the agricultural interests. The cost of such operation should be charged to the users of the water in proportion to the water turned out to them.

A large part of the area has been cultivated and needs little further development. However, there are some parts where rough land leveling is desirable. It will be necessary to dig additional farm ditches to obtain the most efficient use of the limited water supply and on account of the subdivision of large land holdings.

In accordance with the plan outlined by the Northern Great Plains Committee of the National Resources Planning Board, the Bureau of Reclamation should construct Pactola Dam, reservoir, and appurtenant works, negotiate contracts for the sale of water from the reservoir, and operate and maintain these works; the Department of Agriculture should conduct the rough land leveling, the digging of farm ditches, and arrange for settlement and operation and maintenance of the irrigation features on the project and for repayment to the Government of the charges for land development and resettlement. The Department of Agriculture has indicated that it plans to acquire the excess lands with funds already available, subdivide the lands into plots of not more than 160 acres each, and to settle a part of the lands

thus acquired and subdivided with farmers from drought stricken areas. The National Resources Planning Board should assist in coordinating the activities of the Bureau of Reclamation and of the Department of Agriculture.

Summing up the recommendations and suggestions contained herein, I recommend:

(1) That the Bureau of Reclamation construct, operate, and maintain the Pactola Dam, reservoir, and appurtenant works, and negotiate contracts for the sale of water; that the Department of Agriculture conduct the land development program and arrange for settlement, operation, and maintenance of irrigation features on the project lands and for repayment for the land development and resettlement features; and that the National Resources Planning Board assist in the planning and coordinating field.

(2) That an allotment of \$980,000 be made from the 1940 Water Conservation Appropriation to assist in the construction of the project;

(3) That the Work Projects Administration be requested to give prompt consideration to applications which will be presented by the Bureau of Reclamation to obtain \$1,490,000, the remaining funds needed for construction;

(4) And that construction not be initiated until negotiations with the municipality, with the agriculturists, and with the railroad have proceeded to the point where assurance can be given by the Commissioner of the Bureau of Reclamation that the funds allotted from the 1940 Water Conservation Appropriation can be repaid in accordance with the provisions of that item.

The Department of Agriculture and the National Resources Planning Board would be reimbursed for all services connected with the construction of the project by transfers or advances from the funds made available to the Department of the Interior, Bureau of Reclamation, for construction of the project. Letters containing the comments of the Department of Agriculture and the Work Projects Administration are enclosed.

The time required for the construction of the project will depend largely on the availability of relief labor and may extend two, three, or four years.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved November 8, 1939.

(Signed) FRANKLIN D. ROOSEVELT,
President.

OFFICE OF THE SECRETARY,
Washington, October 21, 1940.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: Recently you rescinded \$900,000 of the \$980,000 which you had previously allotted under the Act of May 10, 1939 (43 Stat. 685), to the Rapid Valley project in South Dakota, in order that a part of the amount rescinded could be

allocated to the Eden project in Wyoming. This had been done for the reason that construction of the Rapid Valley project had been delayed by various negotiations, and it was desirable to commence construction of the Eden project with the least possible delay.

Negotiations on the Rapid Valley project have taken a favorable turn, and it is now believed that actual construction can be undertaken in the near future. The project is suitable for construction under the provisions of the Act of August 11, 1939 (53 Stat. 1418), as amended, and it is planned, with your approval, to proceed with construction under the terms of this act and with funds made available for this purpose in the 1941 Interior Department Appropriation Act. Therefore, I am submitting this report on the project in accordance with the requirements of the Act of August 11, 1939, as amended, and I request your approval of the findings and certifications contained herein.

PROJECT PLAN

The proposed work involves the construction of a reservoir of 40,000 acre-feet capacity at the Pactola site on Rapid Creek to supplement the water supply for 12,000 acres of land and to provide a municipal water supply for Rapid City. The principal engineering features will be an earth and rockfill dam 157 feet in maximum height and 1,100 feet in crest length, located 15 miles upstream from Rapid City. The water distribution system for the project has already been constructed, but it is planned to provide certain drainage works in the present program.

The lands to be irrigated are located along Rapid Creek in Pennington County and extend downstream from Rapid City to Farmdale. The area has been irrigated for the past 30 years or more by 11 canals which divert water directly from Rapid Creek. In nearly all years the stream flow is inadequate after the passing of the spring floods, and as a consequence, it is only practicable to raise native hay or other early maturing plants, although the soil and climate are adapted to the growing of a large variety of crops. A supplemental supply of irrigation water would provide protection from drought and permit more diversified farming, thus stabilizing the agricultural industry in this community. Rapid City, an important commercial and recreational center of the Black Hills region is in urgent need of an additional water supply for its present population of 12,000 people and for the increase in demand as the city grows in population. Storage in the reservoir of 10,000 acre-feet of water will be reserved for municipal supply.

PARTICIPATION OF FEDERAL AGENCIES

Construction of the Pactola dam, reservoir and appurtenant works and the drainage system is expected to be accomplished by the Department of the Interior through the Bureau of Reclamation. The present plan, subject to change, is that the Bureau of

Reclamation also will operate the dam after it is built and negotiate contracts with the water users for the repayment of construction charges.

A large part of the project area has been cultivated, but further development will be needed in order to conform to the new farm practices made possible by a dependable water supply. Land will need to be leveled in some sections. It will be necessary to dig additional farm ditches on account of the subdivision of large land holdings and in order to obtain the most efficient use of the water supply. This work is expected to be done by the Department of Agriculture, which is also expected to arrange for settlement and operation and maintenance of the distribution and drainage works on the project, and for repayment to the Government of the charges for land development and resettlement. The Department of Agriculture has indicated that it plans to acquire the excess lands with funds already available, to divide the lands into units of economic size, and to settle a part of the lands with farmers from drought-stricken areas. The proposed participation of the Department of Agriculture is discussed in a letter to me dated September 19, 1940, and that Department has advised that this letter a copy of which is enclosed, may be used as its report to you. Until appropriations are made to the Department of Agriculture for its participation, it is planned that allocations from appropriations made under the authority of the Act of August 11, 1939 (53 Stat. 1418), will be made to the Bureau of Reclamation and that the Department of Agriculture will be reimbursed for services by the Bureau of Reclamation through transfers or advancement of funds from the allocations.

The Work Projects Administration and the Civilian Conservation Corps will expect to provide most of the labor and a small amount of materials, supplies and equipment. A report to you from the Work Projects Administration on the extent of its proposed participation is enclosed.

ESTIMATED COST

The total estimated cost of the dam, reservoir and appurtenant features, drainage and land development program is \$2,910,000, of which \$80,000 have already been allotted by you from the Interior Department Appropriation Act of 1940, \$1,150,000 are expected to be obtained from appropriations made and to be made under the authority of the Act of August 11, 1939, and the amendments thereto, the expenditures therefrom to be within the limitations provided in Sections 1 and 9 of the Act, as amended, and \$1,680,000, through work accomplished by the Work Projects Administration or the Civilian Conservation Corps or both. The construction of works by the Bureau of Reclamation will require \$2,740,000, and the work to be done by the Department of Agriculture, \$170,000. Out of the \$3,500,000 made available by the Interior Department Appropriation Act of 1941, it is estimated that \$300,000 will be needed for work to be accomplished in the fiscal year 1941.

A tabulation giving the estimated breakdown of expenditures

is attached. This shows the total estimated expenditures and the proportionate part of these expenditures expected to be made through the use of (1) the unrescinded remainder (\$80,000) of the allocation made under the Act of May 10, 1939, and (2) the funds expected to be obtained from appropriations made to carry out the provisions of the Act of August 11, 1939, and the amendments thereto, (\$1,150,000). The estimated construction cost has been increased over that previously given on account of the addition of drainage, the rise in commodity prices, and the higher appraisal of the rights of way over that contained in the engineer's report of November 1937, when the first estimate was made. The estimate of expenditures from Work Projects Administration funds is based on the experience of the Bureau of Reclamation on construction with relief forces under the legislative provisions in effect prior to the fiscal year 1940. The efficiency with which the work can be conducted under more recent regulations is unknown. Therefore, the estimate of required Work Projects Administration funds may need revision at a later date.

If forces from the Civilian Conservation Corps are used, the amount to be expended for the work by the Work Projects Administration and the Civilian Conservation Corps is estimated to be equal to that shown for expenditure by the Work Projects Administration in the tabulation. However, the breakdown under the various features would probably not be the same due to the differences in administrative procedures of the two agencies and the legislation which applies to them.

The estimated cost of the reservoir includes \$350,000 for the relocation of a railroad. Of this amount approximately \$175,000 are expected to be obtained from reimbursable appropriations and used to compensate the present owners for abandonment of the railroad or to furnish the labor and supplies required to supplement the contributions from the Work Projects Administration or the Civilian Conservation Corps in the relocation of the railroad. Negotiations for the abandonment or relocation of the railroad will be conducted with the expectation of keeping the expenditure of reimbursable funds within this estimate.

ALLOCATION OF COSTS

The total estimated cost of the proposed construction can be properly allocated to irrigation and to municipal water supply. The reservoir will provide some flood control. There are no opportunities for profitable power development and no Indian lands are involved. It is believed that the water users can repay in 40 annual instalments, following a short development period, \$600,000 toward the construction of the dam, reservoir and appurtenant works and the drainage system. It is also believed that \$500,000 of the cost of constructing the dam, reservoir and appurtenant works will be returned to the United States in revenues from the sale of municipal water supply. Subsidy for flood control benefits is not recommended as the subsidy provided through the work accomplished by the Work Projects Administration and the Civil-

ian Conservation Corps would appear to be ample recognition by the Federal Government of its generally accepted flood control obligations. The expenditures by the Department of Agriculture, estimated at \$130,000 from funds appropriated under the Act of August 11, 1939, and the amendments thereto, would be repaid in accordance with section 5 of the act as amended.

EXCESS LAND HOLDINGS

The breaking up of large private holdings of irrigable land on the proposed project is, in my opinion, highly desirable for the successful operation of the project. This can be accomplished by the Government obtaining control of large holdings of irrigable land through the Department of Agriculture and by the making of agreements with the owners of irrigable lands for the disposal of holdings in excess of the farm units which are to be established for the project. Such arrangements should, in my opinion, be made before the commencement of actual construction of the major physical features of the project.

FINDINGS, CERTIFICATIONS AND RECOMMENDATIONS

Based on the foregoing report and other data available to me concerning the proposed project, I made the following findings and certifications:

- (1) I find and certify that the proposed project has engineering feasibility;
- (2) I find that the estimated cost of the proposed construction is \$2,740,000, exclusive of the cost of participation by the Department of Agriculture, which is estimated at \$170,000;
- (3) I find that of the estimated cost of the project \$2,240,000 are properly allocated to irrigation; \$500,000 are properly allocated to the municipal water supply; and that no part of the costs should properly be allocated to power, irrigation of Indian trust and tribal lands or to flood control;
- (4) I find and certify that the water users probably can repay in 40 annual instalments construction costs in the amount of \$600,000, in addition to the \$130,000 out of the amount to be expended on land development which are to be repaid as provided in section 5 of the Act of August 11, 1939, as amended;
- (5) I find that the estimated costs allocated to the municipal water supply will probably be returned by revenues from the furnishing of water for municipal purposes.

I recommend that you approve the foregoing report and findings and that you find, by your approval of this report, that services, labor, materials, easements and other property, including moneys for the construction of the project, should be made available to the Department of the Interior by the Work Projects Administration, the Civilian Conservation Corps, or other Federal agencies in the amount found necessary by me to make up the difference between the estimated cost of the project construction and the amount which has been allocated from the Interior Department Appropriation Act of 1940 and will be allocated from appropriations made under the provisions of the Act of August 11, 1939, and amendments thereto, subject, however, to the condition that construction of the major physical features of the project shall not be commenced, until arrangements satisfactory to me have been made for the disposal of lands in the project held

in one ownership, in excess of the size of a farm unit as determined by me pursuant to the Act of August 11, 1939, as amended.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE,
Approved October 25, 1940.

(Signed) FRANKLIN D. ROOSEVELT,
President.

OFFICE OF THE SECRETARY,
Washington, February 20, 1942.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: On October 25, 1940, you approved the Rapid Valley irrigation project in South Dakota for construction under the terms of the Act of August 11, 1939 (53 Stat. 1418), as amended. An allotment of reimbursable funds totaling \$1,230,000 was also approved by you at that time.

The purpose of this letter is to advise you of a change in the engineering plans. The principal engineering feature of the project as discussed in the previous letter was the Pactola dam and reservoir. A railroad traversed the entire length of the reservoir, and in the report to you the following statement was made:

The estimated cost of the reservoir includes \$350,000 for the relocation of a railroad. Of this amount approximately \$175,000 are expected to be obtained from reimbursable appropriations and used to compensate the present owners for abandonment of the railroad or to furnish the labor and supplies required to supplement the contributions from the Work Projects Administration or the Civilian Conservation Corps in the relocation of the railroad. Negotiations for the abandonment or relocation of the railroad will be conducted with the expectation of keeping the expenditure of reimbursable funds within this estimate.

After many months of negotiation for the abandonment or relocation of the railroad it was found that shippers objected to abandonment and that the cost of relocating the railroad outside of the reservoir would be in excess of the amount mentioned in the previous paragraph. In view of this situation it was found necessary to turn to an alternative plan for storage through the construction of a dam at the Deerfield site and one or more smaller dams to provide storage equivalent to that which would have been made available by the Pactola reservoir. Consideration also is being given to the lining of a portion of Rapid Creek to prevent seepage losses. Under this revised plan, the City is to be given a prior storage right of 7,000 acre-feet in the Deerfield reservoir. Until the City's uses develop further, it is expected

that part of this right will be available for irrigation use. There will also be available for irrigation a secondary 8,000 acre-foot right in Deerfield, and all storage available in the smaller reservoirs. It is estimated that these changes will not increase the cost of the project beyond that stated in the letter which you approved on October 25, 1940.

The site of the Deerfield dam is about 25 miles above the Pactola site and is on Castle Creek, a tributary of Rapid Creek. The dam will be an earth-fill structure and as now contemplated will be approximately 100 feet in height and 800 feet long across the crest. The storage capacity of the reservoir is expected to be 15,000 acre-feet. The construction of the dam and reservoir is estimated to require \$500,000 of the funds appropriated under the Act of August 11, 1939, and drainage features on the project lands are estimated to require an additional \$100,000 of these special funds. Of the remaining \$630,000 previously approved for allotment, it is planned to use \$500,000 for one or more smaller dams on Rapid Creek or its tributaries, and for the lining of a section of Rapid Creek if this is found by studies now in progress to be desirable. In addition to these allotments for construction, the sum of \$130,000 has received your prior approval for allotment to the Department of Agriculture for work to be done by that Department. With the exception of the change in engineering plans discussed herein, the description of the project, the provisions for carrying out the work, and the findings, certifications, and recommendations are the same as those discussed in my letter to you of October 21, 1940, which you approved on October 25, 1940. A copy of my previous letter is attached.

A complete construction organization has been established on the project for more than a year, and practically all preliminaries leading to actual construction have been accomplished. Equipment ranging from dragline excavators, tractors, and dump trucks, to concrete mixers, air compressors, and machine shop tools, has been purchased, as well as materials and supplies including lumber and reinforcing steel. The rights of way for the engineering features have been appraised, and purchase contracts are being negotiated. A CCC camp at the dam site has already been occupied.

The Department of Agriculture and the Work Projects Administration have been informed of the proposed changes in plans, and both have furnished comments and recommendations in letters to you which are attached. I concur in the recommendations of these organizations and recommend that you approve the proposed change in the engineering plans which has been made necessary through unexpected local developments subsequent to your approval of October 25, 1940.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE.

Approved in accordance with my letter of June 5, 1942.

(Signed) FRANKLIN D. ROOSEVELT,
President.

THE WHITE HOUSE,
Washington, June 5, 1942.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: On February 20, 1942 you submitted for approval your revised plans for the construction of the Rapid Valley irrigation project of South Dakota, under the terms of the Act of August 11, 1939, as amended.

This project is approved with the stipulation that immediate construction shall be confined to the construction of the dam at the Deerfield site and appurtenant works essential for augmenting the municipal water supply of Rapid City, South Dakota, and providing additional water for supplemental irrigation for the Rapid Valley Irrigation District.

The construction of the minor dams and the completion of the project will be postponed as not now essential to the war effort, and held in reserve as a part of the post-war projects to help absorb labor subsequently released by war industry.

It is noted that a construction organization has been established and that the necessary construction equipment and tools, as well as material and supplies including lumber and reinforcing steel, have been purchased.

Sincerely yours,

(Signed) FRANKLIN D. ROOSEVELT,
President.

OFFICE OF THE SECRETARY,
Washington, October 5, 1943.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The papers which are enclosed contain a brief description of the Rapid Valley irrigation project in South Dakota which you approved for construction on June 5, 1942, and a recommendation that construction be continued on the Deerfield unit of the project. In December 1942, construction of this unit was limited by an order issued by the War Production Board.

The project is located near Rapid City, South Dakota. The proposed work would involve completing the construction of a reservoir of 15,000 acre-feet capacity to supplement the water supply for 12,000 acres of land and to provide a municipal supply for Rapid City. The principal engineering feature would be an earth and rockfill dam. The project lands are under cultivation

and under ditch, but because of the lack of late season water they cannot be intensively farmed. Completion of the dam would, in addition to furnishing an adequate irrigation supply, furnish the City with sufficient water to meet abnormal demands imposed by activities associated with the war.

Based upon consultations with the War Food Administrator and information available to me concerning the project, I find that the proposed construction is justifiable as an aid in the production of needed agricultural products, and recommend that you approve the continuation of the construction of the Deerfield unit.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

OFFICE OF THE SECRETARY,
Washington, October 5, 1943.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: There is presented herein for your approval a proposal to complete and to bring into operation the Deerfield Unit of the Rapid Valley irrigation project in Pennington County, South Dakota, under the provisions of the Act of October 14, 1940 (54 Stat. 1119), as amended by the Act of July 16, 1943 (Public Law 152—78th Congress). The construction of this project would provide a supplemental water supply for 12,000 acres of irrigated land and a municipal water supply for Rapid City. On October 25, 1940, you approved a plan which I submitted to you proposing that the Rapid Valley project be constructed under authority of the Act of August 11, 1939 (53 Stat. 1418), as amended. Our inability to obtain the required right of way, however, made it necessary to revise the project plans, and on June 5, 1942, you approved beginning construction in accordance with the revised plans, with the stipulation, however, "that immediate construction shall be confined to the construction of the dam at the Deerfield site and appurtenant works essential for augmenting the municipal water supply for Rapid City, South Dakota, and providing additional water for supplemental irrigation for the Rapid Valley Irrigation District." Copies of papers relating to the above approvals are enclosed.

STATUS OF CONSTRUCTION

The major construction features of the project would be an earth and rockfill dam. All preconstruction work, such as the installation of a CCC camp and a Bureau camp, a water supply sys-

tem, an access and construction road, and other incidental requirements, has been completed. In September 1942 the Selective Service System assigned conscientious objectors under the jurisdiction of the Civilian Public Service to take the place of CCC enrollees, the latter camp having been discontinued in July 1942. All equipment and most of the other critical materials for the construction of the dam and outlet conduit are on hand. Stripping of the dam foundation and excavation of the cutoff trench and outlet conduit have been completed. Embankment of the main portion of the dam is now under way. Critical materials yet required amount to 44 tons of steel, wire, rope, nails, bolts, repair parts for construction equipment, and similar items. Arrangements are being made to build up the strength of the Civilian Public Service camp assigned to the project to 200 men. About 90 men are now available.

Since December 1942 work has been carried on under an order of the War Production Board limiting construction to that necessary to provide employment for persons under the jurisdiction of the Civilian Public Service. On August 26, the War Production Board extended the project rating of A-1-j to June 30, 1944.

ESTIMATED COST AND FINANCING PROCEDURE

When you approved this project on October 25, 1940, it was estimated that the total construction cost would be \$2,740,000. It was expected that the Work Projects Administration would contribute \$1,640,000 of that amount in the form of labor and some materials, and that the interests benefited would repay \$1,100,000. Contracts now being negotiated with the irrigators and Rapid City would require the former to repay \$600,000 and the latter \$500,000. The Work Projects Administration contributed about \$13,000 before being liquidated about half of which was used in connection with the Pactola Dam site which was abandoned because of right of way difficulties. The Civilian Conservation Corps later participated by furnishing approximately \$12,000 in the form of labor and materials, but it too was liquidated. Labor is now being furnished by the Selective Service System through a Civilian Public Service Camp. It is expected that this agency may participate to the extent of \$200,000 exclusive of War Department costs. The present financial arrangements proposed for the completion of the Deerfield Unit are as follows:

Total estimated cost.....		\$1,118,000
Allotted	\$500,000	
Available for allotment	0	
Contributed by Work Projects Administration....	6,000	
Contributed by Civilian Conservation Corps.....	12,000	
Anticipated Civilian Public Service participation..	200,000	718,000
Estimated balance required in lieu of anticipated contributions....		400,000
Over allotment for equipment and building which would be credited upon completion of the project.....		50,000
Estimate of funds required.....		450,000

If you approve the continuation of construction of the Deerfield Unit, it is proposed to allot \$450,000 from the appropriation for Water Conservation and Utility projects in lieu of the contributions of the Work Projects Administration and the Civilian Conservation Corps, and to continue construction in accordance with Section 5 of the Act of July 16, 1943. Sufficient funds for this purpose have been appropriated and are now available for allotment.

CONSULTATION WITH THE WAR FOOD ADMINISTRATOR

On March 2, 1943, I transmitted to the Secretary of Agriculture, for his consideration, an optimum 5-year program covering the production of certain critical war foods in which the bureaus of the Department of the Interior have special administrative responsibilities. The Rapid Valley project was among the irrigation projects recommended for consideration. On May 5, 1943, the War Food Administrator transmitted a list of ten projects, including Rapid Valley, to the Chairman of the War Production Board, and recommended that they receive careful consideration from the standpoint of adding to our production capacity for essential war and post-war foods.

FINDINGS AND RECOMMENDATIONS

In the findings approved October 25, 1940, the reimbursable construction costs, to be repaid by the irrigators, were fixed at \$600,000 under the provisions of Section 3 (b) (iv) of the Act of October 14, 1940. A total of \$500,000 was allocated to the municipal water supply, under the provisions of Section 3 (b) (v) of that Act. Within the limits of the authority of the Act of July 16, 1943, I shall make adjustments of the project's construction cost to the extent necessary to keep the construction costs required to be repaid in conformity with those findings.

I have consulted with the War Food Administrator, acting in the stead of the Secretary of Agriculture, concerning the justification of this project. Based on these consultations and on the information available to me concerning the project, I find that the proposed construction is justifiable as an aid to the production of needed agricultural products. I recommend that you approve this report and finding.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE.

Approved November 22, 1943.

(Signed) FRANKLIN D. ROOSEVELT,
President.

RATHDRUM PRAIRIE PROJECT

IDAHO

The Post Falls unit of the Rathdrum Prairie project was found feasible by the Secretary on December 24, 1943, and approved by the President on January 29, 1944, under the terms of the Water Conservation and Utilization Act of August 11, 1939, as amended.

Hayden Lake unit was found feasible by the Secretary on June 9, 1947, under the provisions of the Reclamation Project Act of 1939.

POST FALLS UNIT

OFFICE OF THE SECRETARY,
Washington, December 24, 1943.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: An investigation has been made of the Post Falls unit of the Rathdrum Prairie project involving the irrigation of approximately 3,527 acres of land in Kootenai County, Idaho, and pursuant to the authority of the Act of August 11, 1939 (53 Stat. 1418), as amended, (herein called the Act), I submit this report on the proposed project and request your approval of the findings, recommendations, and certifications contained herein.

PROJECT PURPOSE

The primary purpose of the proposed project would be to provide a supplemental water supply for 3,527 acres of land which is partly dry farmed and partly inadequately irrigated. The lands proposed for development lie about four miles northwest of the town of Coeur d'Alene, Idaho, within a potentially rich farming

area of 40,000 acres which, it is expected, ultimately will be proposed for development as the Rathdrum Prairie project. The immediate construction of the project would provide a means of increasing the production of agricultural products now vitally needed. After the war it is believed that the project would contribute toward the solution of problems arising out of interstate movements of agricultural populations by providing new homes and opportunities for a few additional farm families.

THE PLAN

A new pumping plant would be constructed on the Spokane River about four miles west of Coeur d'Alene. Water would be pumped northerly from this point through discharge pipes into a main canal which would lead the water to laterals through which it would be carried to the project lands. A distribution system consisting of earth laterals with turnouts would be constructed to replace an existing pressure pipe system which has decayed beyond repair.

If approved, construction would not be undertaken unless there appeared to be a reasonable assurance that a satisfactory agreement for the purchase of pumping power could be obtained, and if construction should be started it would be stopped if, after a reasonable length of time, such an agreement were not in fact executed.

Structures contemplated for the development would consist of a pumping plant, a transmission line, a substation, discharge pipes, a main canal and lateral system, and the usual turnouts, wasteways, small bridges, and similar features. An adequate water supply for the lands to be benefited by the project works is believed to be available. Changes in these general plans may be found necessary, but it is expected that any changes will be of minor nature and will neither alter the general objectives of the project nor result in material departures from the present findings, predicated on the present plans for the project.

PARTICIPATION OF FEDERAL AGENCIES

The Bureau of Reclamation would construct the pumping plant, discharge pipes, transmission line, substation, canal system, and other necessary and appurtenant structures, and, subject to change, also would operate the system after it is built. The Bureau would negotiate contracts with the water users for the repayment of the reimbursable construction charges.

The War Food Administrator, acting in the stead of the Secretary of Agriculture, has transmitted a letter which is enclosed, indicating his approval of the project and the extent of the proposed participation by the Department of Agriculture. From this letter it will be noted that the War Food Administrator concurs in my belief that the construction would be justifiable as an aid in the production of needed agricultural products.

Services, labor, materials, supplies, equipment, and similar

items which may become available through the Selective Service System, Prisoner of War Camps, or other Federal agencies may be utilized under the terms and conditions fixed by such agencies, if, in my opinion, such use would effectively expedite construction of the project.

PARTICIPATION OF NON-FEDERAL AGENCIES

Most of the lands to be benefited by the project lie within the boundaries of the Post Falls Irrigation District. It is expected that those outside the District would be included therein, and that a contract would be made with that or a similar organization embracing the lands in question for the repayment of that part of the construction costs which is determined to be reimbursable. The water users benefited by the work of the Department of Agriculture would be required to repay the reimbursable money expended in that work in accordance with the Act. Aid which may be offered by the local interests probably would be accepted.

ESTIMATED COST AND FINANCING PROCEDURE

The total cost of the project which would be undertaken by this Department would be \$300,000. In connection with the project, the Department of Agriculture would undertake activities pursuant to Section 5 of the Act which are estimated to cost \$149,000. The activities of both Departments would be financed with monies heretofore appropriated for Water Conservation and Utilization projects. The total expenditure is estimated to be \$449,000.

It is estimated that the water users can repay \$190,000 of the investment in the works proposed to be built by the Bureau of Reclamation. All net project costs in excess of this amount would, as authorized by the Act, be excluded from the project construction cost and be treated as non-reimbursable.

It is estimated that the water users can repay \$80,000 of the costs of the work performed by the Department of Agriculture. All costs in excess of this amount would, as authorized by the Act, be treated as non-reimbursable.

Sufficient funds for these purposes have been appropriated and are now available for allotment.

SIZE OF FARM UNITS

Since the exact size may vary over the project area in accordance with the varying conditions of the project lands, limitations on the various holdings will be established after more complete and final surveys have been made. It now appears that ultimately the proper size holding would be between 80 and 160 acres of irrigable land. In this connection, considering the problems attendant on farm operation during the war and the need for the greatest possible production of agricultural products with the available farm labor supply, I expect to determine that for the

duration of the war the limitations on the delivery of water will not be applicable to existing land holdings which exceed in area the maximum to be established for any farm unit.

FINDINGS, CERTIFICATIONS, RECOMMENDATIONS

Based upon the report covering the engineering and economic aspects of the work proposed to be accomplished by the Bureau of Reclamation, I find and certify that:

1. The proposed project has engineering feasibility.
2. The total estimated cost would be \$300,000.
3. The estimated cost which properly could be allocated to irrigation is \$300,000.
4. The water users probably could repay \$190,000 in accordance with the requirements of Section 4 of the Act.
5. No part of the estimated costs properly could be allocated to municipal or miscellaneous water supply or power.
6. No part of the estimated cost properly could be allocated to the irrigation of Indian trust and tribal lands.
7. No part of the estimated costs properly could be allocated to flood control.
8. The proposed construction is justifiable as an aid in the production of needed agricultural products.
9. Construction would not be started without a reasonable assurance that a satisfactory agreement would be executed for the purchase of pumping power, and if construction should be started it would not be continued if such an agreement could not be executed within a reasonable time.

If you approve the project, it is planned to proceed immediately with matters relating to land acquisition, water rights, and repayment contracts so that the requirements of the statutes may be met as promptly as possible. The project has heretofore been submitted to the War Production Board for clearance for commencement of construction and procurement of materials needed for construction.

On the basis of the foregoing report and findings, I recommend that you approve this project for construction.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE.

Approved January 29, 1944.

(Signed) FRANKLIN D. ROOSEVELT,
President.

THE SECRETARY OF THE INTERIOR,
Washington 25, D. C., January 18, 1945.

THE PRESIDENT,
The White House.
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: The enclosed letters,¹ dated December 8, 1944, from Mr. Wilson Cowen, Assistant War Food Administrator, contain a recommendation and a request for authorization to expend funds for the acquisition of certain lands on the Post Falls unit of the Rathdrum Prairie irrigation project in Kootenai County, Idaho.

This project was approved for construction by you on January 29, 1944, under the terms of the act of August 11, 1939 (53 Stat. 1418), as amended. Your approval provided for the development of a supplemental water supply for 3,527 acres of land. The irrigation features were to be constructed by this Department, and the Department of Agriculture was to undertake certain developmental activities including "the acquisition of excess holdings of land where necessary to adjust the operating unit pattern to assure production under irrigation." At the time of your approval, the estimated cost of construction by the Department of the Interior was \$300,000 of which, it was estimated, the water users could repay \$190,000. The estimated cost of the work to be performed by the Department of Agriculture was \$149,000 of which, it was estimated, the water users could repay \$80,000. Copies of papers relating to the authorization of this project are enclosed.

Since you approved this project for construction, both Departments have negotiated with local interests relating to the many items which must be settled prior to the beginning of construction. I am satisfied that the water rights and rights of way necessary for construction and operation of the project either have been acquired or can be acquired with adequate titles and at satisfactory prices. Accordingly, I have made such findings in this regard as are required by the statute. Invitations for bids have been issued, and it is expected that a contractor will begin work on the irrigation features early this spring. I have been informed that the Department of Agriculture likewise has made good progress in settling preconstruction difficulties, and that considerable acreage has been acquired in connection with the program of that Department.

The Assistant War Food Administrator indicates that it has been found necessary to acquire certain additional lands within the project area. For this purpose, he requests an additional allotment of \$30,000 from funds under the control of the Department of Agriculture. It is noted that Mr. Cowen has deter-

¹ Excluded from this publication.

mined that the water users can reasonably be expected to repay all of this amount in addition to the \$80,000 previously determined as the reimbursable costs of the work to be performed by the Department of Agriculture.

Following consultation with the War Food Administrator, acting in the stead of the Secretary of Agriculture, I find that the proposed construction is justifiable as an aid in the production of needed agricultural products. Accordingly, I transmit the recommendations of the Assistant War Food Administrator and recommend that you approve this report.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE.

Approved February 24, 1945.

(Signed) FRANKLIN D. ROOSEVELT,
President.

HAYDEN LAKE UNIT

BUREAU OF RECLAMATION, REGION I,
Boise, Idaho, October, 1946.

To: The Commissioner, Bureau of Reclamation
From: Regional Director, Region I, Boise, Idaho
Subject: Plan for Development of Hayden Lake Unit, Rathdrum
Prairie Project, Idaho.

TRANSMITTAL

1. Transmitted herein is my report, together with appended ² substantiating material, describing the contemplated development of the Hayden Lake Unit of the Rathdrum Prairie Project, Idaho. Development in accordance with the plan described here is essential to preserve improvement values and increase crop production on approximately 1,000 acres of irrigated land served by the deteriorated system of the established Hayden Lake Irrigation District. I recommend that you present the report for appropriate departmental action for the purpose of securing immediate authorization by the Congress to construct the Hayden Lake Unit of the Rathdrum Prairie Project.

2. This letter summarizes the more detailed appended report

² Excluded from this publication.

and makes specific recommendations leading to the construction of the project. Developments subsequent to the preparation of the appended report make it desirable to modify certain features of that report. The major points herein revised are:

(a) The estimates of construction costs have been revised from \$79,000 to \$90,650 to reflect 1946 costs.

(b) The potential project area has been increased to 1,050 acres. The Hayden Lake Irrigation District has been petitioned by land owners within the district to place approximately 65 acres (62.5) of additional land on its assessment rolls. Inasmuch as the construction of the proposed pipeline to rehabilitate the present system has the capacity to serve this larger acreage, the project area is here considered to contain 1,050 acres of irrigable land in place of 987.5 acres as found in the appended report.

(c) The estimates of operation and maintenance costs and of benefits have been revised to apply to the larger project area.

(d) The indicated ability of water users to pay for water costs during each of the next 40 years has been increased from \$5.65 to \$5.75 for reasons noted later in my report.

(e) Complete repayment of construction costs on the basis of 1946 prices is indicated. Landowners within the District appear to have accumulations of cash made during the current period of high income. The District has indicated its willingness to make a levy against its members in order to provide for a cash payment on construction, prior to completion of the project, in an amount equal to the difference between the estimated construction costs and the estimated repayment ability of the water users during the 40-year repayment period.

AUTHORITY FOR THE REPORT

3. This report is authorized to be made by virtue of the Federal Reclamation Laws (Act of June 17, 1902, 32 Stat. 388, and acts amendatory thereof or supplementary thereto).

COOPERATION AND ACKNOWLEDGMENTS

4. The investigations on which this report is based were undertaken at the request of officials and residents of the Hayden Lake Irrigation District. Among the several individuals and agencies assisting the Bureau of Reclamation in the investigations, special acknowledgment is made to contributions of:

Hayden Lake Irrigation District
United States Department of Agriculture
United States Employment Service
Coeur d'Alene Chamber of Commerce
Geological Survey, United States Department of the Interior
Kootenai County, Idaho
Treasurer
Tax Assessor
Agricultural Agent

DESCRIPTION OF AREA

5. The Hayden Lake Unit (also referred to subsequently as the project or project area) shown on the Map No. 227-D-99 embraces approximately 1,050 acres of the total area of 37,000 acres included within the contemplated Rathdrum Prairie Project, Idaho, which is shown on the accompanying map. One unit of the larger project, the Post Falls Unit, of 3,500 acres, already has been constructed. Development of the remaining 32,500 acres in the Rathdrum Prairie Project is the subject of continuing investigation, but plans are sufficiently well advanced to insure effective integration of the constructed Post Falls Unit and the proposed Hayden Lake Unit in the larger undertaking.

* * * * *

9. The number of land holdings in the Hayden Lake Unit exclusive of those for which admission to the district is being sought totals 117, all except one of which, 62.5 acres in small tracts held by the Hayden Lake Holding Company, are owned by individuals. The ownership units, over 80 percent of which are operated by the owners, average somewhat less than 10 acres in size. Nearly half, 47.9 percent, are of five acres or less; 44.4 percent lie between 5.1 and 10 acres in size; and only 7.7 percent exceed 10 acres.

10. Due partly to lack of irrigation water, the intensive types of land use normally anticipated on small units are not characteristic of the project area. General field crops, consisting in major part of hay and grain, were grown on 51 percent of the project area in 1945, and pasture accounted for an additional 21 percent. Fruits, principally apples, occupied about 10 percent, and family gardens, somewhat more than two percent of the project area. Nearly six percent was idle or fallow, and equal percentage was used for buildings and grounds, and somewhat less than five percent was occupied by roads and other rights-of-way. Livestock are maintained in very limited numbers on this typical part-time farming area.

11. The large number of residences and small farmsteads accounts for the relatively high average value of \$379 per acre for land, buildings, machinery, and livestock in the project area. The value of land alone is relatively low, ranging from \$99 per acre on units of five acres or less in size to \$82 on units over 10 acres in size, and averaging about \$91. The estimated gross value of crops for the project area of 1,050 acres under present water conditions, but at average prices to be anticipated in years ahead, totals about \$22,400 or \$21.34 per acre. If estimated at prices prevailing in 1946, these values would be substantially greater.

* * * * *

NEED FOR DEVELOPMENT

14. Rehabilitation of the irrigation system now serving the project area is imperative to assure the continued delivery of

water. The original system, constructed in 1906, consisted of a pumping plant to lift water from Hayden Lake, about 100 feet below the general level of the project area, a discharge line of wood-stave pipe about 10,000 feet long, and a wood-stave pipe distribution system to serve 2,025 acres of land. In 1922, a new system was installed to replace the original, which had so deteriorated that only a small part of the water pumped was reaching the land. The discharge line was reconstructed in part of concrete pipe and in part of wood-stave pipe; and the lateral distribution system was replaced exclusively with concrete pipe. The 1.5 acre-feet per acre of water which it was possible to deliver to the entire area proved inadequate during the drier period encountered after 1922; operators found it difficult to meet annual charges; and the district defaulted payments of principal and interest on the bond issue floated to reconstruct the system. In 1933, the total bond issue of \$150,000 remained outstanding, the district owed \$50,000 in interest, and about half of the lands in the district had become delinquent on the county tax rolls. In the refinancing which took place in 1933, the bondholders, in return for cancellation of the bonded indebtedness and accumulated interest, took title to about half of the district lands, to which an adequate water supply could not be delivered, and accepted a payment of \$50 per acre or a first mortgage in that amount from owners electing to salvage their holdings. The district removed all but 987.5 acres of the original 2,025 from its assessment rolls and has continued to provide irrigation water to the smaller acreage. This remaining acreage is now free from any lien for the former bonded debt. Deliveries have been entirely inadequate during recent years, however, because of repeated failures of the wood-stave pipe discharge line.

15. As a result of difficulties with the discharge line, water was delivered only four times during the 1945 irrigation season, and on each occasion the delivery was adequate only for about one-third of the project area. Available water was largely used on gardens, orchards, and truck crops. Anticipating the shortage on the basis of experience in previous years, a large acreage was planted to dry-farm grain crops. Few pastures received water and consequently provided little feed. In part because of drouth, fruit trees on many units were in an unproductive condition.

16. Hence, unless the proposed works are constructed, the lands of the district will revert to dry-farming, investments of land-owners and of the district will be lost, and some displacement of population will take place, though continued operation of a separate domestic water system of the district probably would permit continued use of the area for residential purposes. Beyond the losses which the development would prevent, the adequate and dependable supply of water assured by it would permit a substantial increase in the value of products grown, would increase the part-time operator's income from farm production, and would create a few additional opportunities on the 62.5 acres of the Hayden Lake Holding Company which are unattractive to prospective settlers under present conditions.

17. Proposed construction work is limited to replacement of the

PROPOSED PLAN OF DEVELOPMENT

8,600 feet of wood-stave pipe discharge line placed in 1922 and overhaul of the pumping equipment. The lowest 1,100 feet of the replacement would be 30-inch, 10-gauge, welded steel pipe; and the remaining 7,500 feet would be of 30-inch, lock joint, reinforced concrete pipe. The existing concrete pipe discharge line beyond the replacement and the concrete pipe distribution system is in satisfactory condition. The domestic water system serving the project area, which has a separate pumping plant and separate distribution system, also is in satisfactory condition.

18. The project area includes some of the better lands of the Rathdrum Prairie. In accordance with classification standards established for the Rathdrum Prairie area, the project lands fall principally in Class 1. Though of only medium fertility, the soils are suited to general farming, truck crops, and some types of fruit production.

19. The water supply from Hayden Lake is adequate to permit the annual pumping of 2.5 acre-feet per acre for the 1,050 acre project area, in addition to other developed uses for domestic and irrigation water now dependent upon the source. With an estimated loss in the distribution system of six percent, deliveries would equal the established annual farm requirement of 2.35 acre-feet per acre. Tests by the State Bacteriological Laboratory indicate that the quality of the water from Hayden Lake now delivered through the domestic water system is entirely satisfactory for domestic use. No question of priority of water right with two other small irrigation districts which pump from Hayden Lake is in prospect, inasmuch as the Hayden Lake Irrigation District holds the senior right to diversion.

COSTS

20. Construction costs, based on unit prices prevailing in 1946, are estimated at \$90,650. This rounded total is made up of the following items: discharge line, \$67,960; pump and motor overhaul, \$2,000; right-of-way, \$200; investigations, \$1,500; and engineering, contingencies, and overhead, \$18,990. Average annual construction costs, assuming a 40-year repayment period without interest, would amount to \$2.16 per acre on the enlarged project area.

21. Operation and maintenance costs for the project assuming an area of 1,050 acres, based on itemized past expenditures of the district, are estimated at \$4,220 annually, or \$4.02 per acre. Estimated annual costs for operation and maintenance and for repayment of construction costs in 40 years thus total \$6.18 per acre for the expanded project area.

BENEFITS * * *

REPAYMENT

23. Annual assessments for irrigation water levied by the district were \$4.00 per acre prior to 1944, when they were increased

to \$4.50. Payments have been successfully met, and all assessments are paid up. It cannot be assumed, however, that water users would long continue to pay assessments of \$4.50 per acre for the poor service now received.

* * * * *

CONCLUSIONS

27. The proposed plan is feasible as an engineering development; its prospective benefits exceed the costs; and full repayment of construction costs by water users is possible. In view of these considerations, it is concluded that the development should be undertaken. Repayment is in part dependent upon employment in off-farm work, the continued availability of which, in the volume now enjoyed, is uncertain. The suggested annual water charge of \$5.75 is believed to be the maximum payment that it is safe to assume water users can meet during the 40 year repayment period, all factors considered. Such payments would fall short by \$17,850 (after meeting expected operation and maintenance expenses of repaying the estimated construction cost of \$90,650 in 40 years). Water users in Hayden Lake Irrigation District, however, have authorized the Board to levy a cash assessment on project lands to raise \$17,850 (or such like amount as needed) and to place this money in escrow prior to authorization of the project for payment to the United States of America when authorization of the project has been secured. In view of the favorable wartime earnings in the area, it is believed that water users can make such cash payments (averaging \$17.00 per acre) from savings and hence their ability subsequently to pay the recommended annual water charges will not be impaired.

The proposed plan not only would preserve established improvement values and prevent loss of that portion of the family income secured by project residents from their units (if not prevent migration in search of opportunities elsewhere) but also would permit residents to increase substantially the value of products obtained from their units, and thus stabilize the economy of the area.

RECOMMENDATIONS

28. It is recommended:

a. That the following works, and such appurtenant works as may be incidental thereto, constituting the Hayden Lake Unit of the Rathdrum Prairie Project, be authorized to be constructed by the Bureau of Reclamation, Department of the Interior, substantially in accordance with plans set forth in this report, with such modifications, omissions or additions as you, with the approval of the Secretary, may find proper for carrying out the project to the end of providing irrigation water to the 987.5 acres of land now served by the Hayden Lake Irrigation District, and to 62.5 acres, the owners of which have petitioned for inclusion in

the District, and which can be served by works of the District, to wit:

Replacement of 8,600 feet of wood-stave pipe discharge line,
Overhaul of installed motor and pump equipment;

b. That the Hayden Lake Unit of the Rathdrum Prairie Project be authorized to be constructed, operated, and maintained in accordance with the Federal Reclamation Laws (Act of June 17, 1902, 32 Stat. 388, and acts amendatory thereof or supplementary thereto): Provided:

(1) That this report shall be deemed to satisfy the requirements of the Federal Reclamation Laws governing the submission to the President and the Congress of a finding of engineering feasibility;

(2) That the water users shall be required to pay the total cost of construction of the proposed works in the maximum repayment period and on terms and conditions available under the provisions of subsection 9 (d) of the Reclamation Project Act of 1939, of which amount all estimated costs in excess of \$72,800 may be required by the Secretary to be paid as a condition precedent to the initial delivery of water by means of the proposed works.

(Signed) R. J. NEWELL,
Regional Director.

BUREAU OF RECLAMATION,
Washington, April 28, 1947.

The SECRETARY OF THE INTERIOR.

SIR: A plan for the development of the Hayden Lake unit, Rathdrum Prairie project, located in Kootenai County in northern Idaho, is presented³ in this report which is based on the accompanying report of the regional director, Boise, Idaho, dated October 1946, and entitled, "Hayden Lake unit, Rathdrum Prairie project, Idaho." The plan of development has been formulated to preserve improvement values and increase crop production on 1,050 acres of land now served by the deteriorated system of the established Hayden Lake irrigation district. Plans for the contemplated Rathdrum Prairie project are sufficiently well advanced to insure effective integration of the Hayden Lake unit in the larger undertaking.

Irrigation of the project lands was first undertaken in 1906 and at that time the district embraced 2,025 acres. The district was refinanced in 1933, and at that time the irrigated acreage was reduced to 987.5. The Hayden Lake irrigation district has been petitioned by landowners to place 62.5 acres of additional land on its assessment rolls. The project system includes a pump-

³ Excluded from this publication.

ing plant to lift water from Hayden Lake, which is about 100 feet below the project area, a wood-stave and concrete pipe discharge line about 10,000 feet long, and a concrete pipe distribution system. Deliveries of water to project lands during recent years have been entirely inadequate due to repeated failures of the wood-stave pipe discharge line. Unless the existing works are rehabilitated, the lands of the district will revert to dry-farming, and investments of landowners and of the district will be lost. However, continued operation of a separate domestic water system of the district probably would permit continued use of the area for residential purposes.

Within the Hayden Lake project area, the characteristic use of land is a combination of suburban residence and part-time farming. A few operators, engaged in intensive types of farming such as dairying or the production of truck and fruit crops, are full-time farmers, and a few additional residents are engaged in full-time farming on nearby, dry-farmed wheat lands. Forty-one percent of the landowners, however, were engaged full time in work away from their units during 1944. There are 117 land holdings in the Hayden Lake unit exclusive of those for which admission to the district is being sought. With only one exception, all of these are owned by individuals. The exception is made up of the holdings of the Hayden Lake Holding Co., 62.5 acres in all. The ownership units average somewhat less than 10 acres in size. Nearly half are of 5 acres or less. The large number of residences and small farmsteads account for the relatively high average value of \$379 per acre for land, buildings, machinery, and livestock in the project area.

The plan of development provides for replacement of the 8,600 feet of wood-stave pipe discharge line and overhaul of the pumping equipment at an estimated construction cost of \$90,650. The system will then be adequate to serve an area of 1,050 acres. The project is found to be economically feasible and it has a benefit to cost ratio of 3.14 to 1.00. It will be noted, however, that the Bureau's undertaking this work will result in an irrigation system, title to part of which would be in the United States and title to the remainder of which would be in the irrigation district. The protection of the Federal investment will, therefore, require that arrangements be made with the district for operation and maintenance of their portion of the works by the United States in the event that the Secretary of the Interior finds that the security of the Federal investment is being prejudiced by inadequate maintenance of the district's works or for any other reason.

The water users of the Hayden Lake irrigation district are now successfully meeting annual assessments of \$4.50 per acre and it is indicated that they will be willing to meet annual assessments of \$5.75 per acre. Since the average land holdings are too small to provide suitable income for subsistence of a family, proposed future assessments will be dependent on the continuance of off-the-farm employment in the area. It is estimated that after project development the annual operation and maintenance costs will be \$4.02 per acre, and thus \$1.73 of the total annual payment per acre would be applicable to the retirement of construction costs.

On this basis, total payments toward construction charges would equal \$72,800 in a 40-year period. This would fail to retire the total estimated construction costs of \$90,650 by an amount of \$17,850 or \$17 per acre.

Water users in the Hayden Lake irrigation district have authorized the board of directors to levy a cash assessment on project lands to raise immediately \$17,850 (or such like amount as needed) and to place this money on deposit for payment to the United States of America when the Congress appropriates funds for construction of the project or at such other time, such as completion of project construction, as might be fixed by the United States. This contribution, together with the total annual repayments over a 40-year period, would reimburse the initial construction cost.

Based on this contribution from the water users to supplement the amount which it is estimated they can reasonably be expected to repay in 40 years, the project meets the requirements for authorization under section 9 (a) of the Reclamation Project Act of 1939. I find that the proposed construction has engineering feasibility; that the estimated cost of the proposed construction is \$90,650; that the part of the estimated cost which can properly be allocated to irrigation and probably be repaid by the water users is \$90,650 (predicated on the proposed advance contribution noted above); that no part of the estimated cost can be properly allocated to power; and that no part of the estimated cost can be properly allocated to municipal water supply or other miscellaneous purposes. I recommend that you adopt this as your proposed report on the Hayden Lake unit of the Rathdrum Prairie project, Idaho, and that you authorize me, in your behalf, to transmit copies of this letter and of the attached report to the affected State of Idaho and to the Secretary of War in accordance with the requirements of the Flood Control Act of 1944. Upon clearance with the affected State and the Secretary of War, copies of this and the accompanying reports, together with the comments, if any, of the affected State, and the Secretary of War, will be submitted for your transmittal to the President and, subsequently, to the Congress.

It is clear that the project meets the standards of section 9 (a) of the Reclamation Project Act of 1939 and, in the absence of adverse comments from the affected State and the Secretary of War, you may authorize the project for construction by presentation of these findings and report to the President and the Congress. I recommend, however, that, if authorized, construction be deferred until the Hayden Lake irrigation district has deposited for payment to the United States on completion of construction, under an agreement satisfactory to you, an amount which, together with the estimated annual repayments over a 40-year period, is equal to the estimated cost of the project, and until the district has also agreed that, by appropriate provisions in the repayment contract or elsewhere, it will consent to the United States taking over the operation and maintenance of all portions of the project, title to which is in the district, if, in the judgment of the Secretary, such action is necessary to protect the Federal

investment and will consent to such an increase in the operation and maintenance charges as is required in the event of such action.

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved May 5, 1947.

(Signed) J. A. KRUG,
Secretary of the Interior.

BUREAU OF RECLAMATION,
Washington, D. C., June 9, 1947.

The SECRETARY OF THE INTERIOR.

SIR: On May 5, 1947, you approved my proposed report of April 28 on the Hayden Lake unit, Rathdrum Prairie project, Idaho, adopting it as your proposed report. In that report it was concluded that the project met the standards of feasibility prescribed in section 9 (a) of the Reclamation Project Act of 1939 and that, in the absence of adverse comments from the affected State and from the Secretary of War, you might authorize the project for construction by presentation of a finding of feasibility to the President and to the Congress.

You authorized me to transmit copies of your proposed report to the affected State of Idaho and to the Secretary of War in accordance with the requirements of the Flood Control Act of 1944. Copies of the replies are attached. The Secretary of War has stated that the proposed project will not conflict with any flood control or navigation interests of the War Department, and the Governor of Idaho has recorded approval of the plan and project as presented in the report. In addition, the Department of Agriculture and the Federal Power Commission have reviewed the report and copies of their comments are attached. The comments of the Department of Agriculture are favorable to the development of the project, and the Federal Power Commission reports that no water power values would be impaired.

Accordingly, it is recommended that you adopt the proposed report of April 28, 1947, as your report; that you find the Hayden Lake unit of the Rathdrum Prairie project to be feasible in accordance with the provisions of section 9 (a) of the Reclamation Project Act of 1939; and that you transmit it, together with the attached comments, to the President and subsequently to the Congress.

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved and adopted June 9, 1947.

(Signed) OSCAR L. CHAPMAN,
Acting Secretary of the Interior

OFFICE OF THE SECRETARY,
Washington, June 9, 1947.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: There is enclosed a report to me, dated April 28, 1947, from the Commissioner of Reclamation and an accompanying report, dated October 1946, by the regional director of the Bureau of Reclamation on the Hayden Lake unit of the Rathdrum Prairie project, Idaho. Both reports recommended that the Hayden Lake unit be authorized for construction by the Bureau of Reclamation.

The Commissioner has obtained the written views of the affected State of Idaho and of the Secretary of War, as the Flood Control Act of 1944 requires. Neither of them has any objection to the report or to the construction of the project. Letters of comment on the report from the Department of Agriculture and from the Federal Power Commission have been obtained. They, too, are in agreement with the findings of the report. Copies of the letters referred to above are attached.

I find that the proposed construction has engineering feasibility, that the estimated cost of the proposed construction is \$90,-650, and that the whole of the estimated cost can properly be allocated to irrigation and probably be repaid by the water users. Consequently I find the Hayden Lake unit of the Rathdrum Prairie project authorized for construction under the provisions of section 9 (a) of the Reclamation Project Act of 1939.

Unless you have an objection, the report and the other documents enclosed will be transmitted to the Congress in accordance with the provisions of the Reclamation Project Act of 1939.

Sincerely yours,

(Signed) OSCAR L. CHAPMAN,
Acting Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, June 20, 1947.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This will acknowledge receipt of Acting Secretary Oscar L. Chapman's letter dated June 9, 1947, addressed to the President through the Bureau of the Budget, enclosing a proposed report on the Hayden Lake unit of the Rathdrum Prairie project, Idaho.

The Director of the Bureau of the Budget, in compliance with instructions of the President dated July 2, 1946, has authorized me to advise you that there would be no objection to the submission of the proposed report to the Congress.

Sincerely yours,

(Signed) L. C. MARTIN,
Assistant Director, Estimates.

OFFICE OF THE SECRETARY,
Washington, July 7, 1947.

Hon. JOSEPH W. MARTIN, JR.,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: In accordance with the requirements of section 9 of the Reclamation Project Act of 1939, I submit herewith my report and findings on the Hayden Lake unit of the Rathdrum Prairie project, Idaho.

I find that the proposed construction has engineering feasibility, that the estimated cost of the proposed construction is \$90,650, and that the whole of the estimated cost can properly be allocated to irrigation and probably be repaid by the water users.

Pursuant to the procedures contemplated in section 1 of the Flood Control Act of 1944 (58 Stat. 887), the report has been transmitted to the Governor of the State of Idaho and to the Secretary of War. Their views are incorporated in the enclosed documents.

The requirements of section 9 (a) of the Reclamation Project Act of 1939 and of section 1 of the Flood Control Act of 1944 having been met, the project is authorized for construction in accordance with the Federal Reclamation Laws.

On June 20, this report was submitted to the President. The Bureau of the Budget has advised, on instructions of the President, that there would be no objection to the submission of this report to the Congress.

Sincerely yours,

(Signed) OSCAR L. CHAPMAN,
Under Secretary of the Interior.

EMERGENCY REHABILITATION

[Extract from] An act making appropriations for the Tennessee Valley Authority, certain agencies of the Department of the Interior, and civil functions administered by the Department of the Army, for the fiscal year ending June 30, 1957, and for other purposes. (Act of July 2, 1956, 70 Stat. 474, 476, Public Law 641, 84th Cong., 2d sess.)

* * * * *

Construction and Rehabilitation: * * * *Provided further,* That not to exceed \$520,000 shall be available toward emergency rehabilitation of the works of the Hayden Lake unit, Rathdrum Prairie project, Idaho, to be repaid in full under conditions satisfactory to the Secretary of the Interior. * * *

RIO GRANDE PROJECT

TEXAS-NEW MEXICO

The Rio Grande project was authorized by the Secretary on December 2, 1905, under the Reclamation Act of 1902; examined and reported upon by a Board of Army Engineers and approved by the President January 5, 1911, pursuant to the act of June 25, 1910 (36 Stat. 836).

Rio Grande Canalization project was authorized by the acts of August 29, 1935 (49 Stat. 961) and June 4, 1936, (49 Stat. 1463).

EXTENSION OF RECLAMATION ACT TO ENGLE DAM

An act relating to the construction of a dam and reservoir on the Rio Grande, in New Mexico, for the impounding of the flood waters of said river for purposes of irrigation. (Act of February 25, 1905, 33 Stat. 814, Public Law 104, 58th Cong., 3d sess.)

* * * That the provisions of the Reclamation Act approved June seventeenth, nineteen hundred and two, shall be extended for the purposes of this Act to the portion of the State of Texas bordering upon the Rio Grande which can be irrigated from a dam to be constructed near Engle, in the Territory of New Mexico, on the Rio Grande, to store the flood waters of that river, and if there shall be ascertained to be sufficient land in New Mexico and in Texas which can be supplied with the stored water at a cost which shall render the project feasible and return to the reclamation fund the cost of the enterprise, then the Secretary of the Interior may proceed with the work of constructing a dam on the Rio Grande as part of the general system of irrigation, should all other conditions as regards feasibility be found satisfactory.

EXTENSION OF RECLAMATION ACT TO TEXAS

An act to extend the Irrigation Act to the State of Texas. (Act of June 12, 1906, 34 Stat. 259, Public Law 225, 59th Cong., 1st sess.)

* * * That the provisions of the Act entitled "An Act appropriating the receipts from the sale and disposal of public lands in certain States and Territories to the construction of irrigation works for the reclamation of arid lands," approved June seventeenth, nineteen hundred and two, be, and the same are hereby, extended so as to include and apply to the State of Texas.

ELEPHANT BUTTE DAM AND RESERVOIR

[ORIGINALLY ENGLE DAM]

OFFICE OF THE SECRETARY,
Washington, November 25, 1905.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: I am in receipt of your communication of the 15th instant relative to the Engle dam in New Mexico, in which for reasons stated you recommend "that this project be considered in connection with the other emergency projects and that appropriate instructions be given as to the action to be taken concerning these water users' associations."

After a careful consideration of your communication, and of Departmental approval on May 10, 1905, of the recommendations of the Reclamation Service made April 3, 1905, I desire to inquire if the recommendations in your said letter of the 15th instant are not premature.

The first paragraph of the recommendations approved by the Department on May 10, 1905, reads as follows:

That, subject to such possible Congressional action, the Reclamation Service be authorized, in accordance with the act of February 25, 1905, to ascertain whether there is sufficient land in New Mexico and Texas which can be supplied with the stored water at a cost which shall render the Engle dam feasible.

In a letter of April 3, 1905, on this subject you stated "In a great question like this which has been investigated from many standpoints, there is opportunity for divergence of opinion and *final action can only be taken wisely with full consideration of the facts* and of the larger policy of the Government in its treatment of International waters." (The emphasis is mine.)

You will remember that your recommendations of April 3, *supra*, were the subject of considerable correspondence between this Department and the Department of State before Departmental action thereon on May 10th. Since the last named date there has been nothing received at the Department in the way of detailed information except your letter of the 15th instant, which has informed the Department that "there is sufficient land in New Mexico and Texas which can be supplied with the stored water at a cost which shall render the Engle dam feasible."

In view of the statement in your letter of April 3, 1905, which I have underscored on the first page hereof, I am of the opinion

that the Department should have full and complete details of the investigations which it authorized the Reclamation Service to make under the act of February 25, 1905, before I would be justified in taking final or definite action in relation thereto. I have therefore to request that you submit a full and detailed report of the action taken by the Reclamation Service under Departmental instructions of May 10, 1905, with a complete statement of the conditions exactly as they exist, in order that the Department may be fully informed in the premises, together with such suggestions and recommendations as you may deem advisable.

In any event, the Department would like to be advised as to what is meant by the expression "other emergency projects" and what "action," in view of the situation as herein stated, should in your judgment be taken concerning these water users' associations.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

LEASBURG DIVERSION DAM AND CANAL

UNITED STATES GEOLOGICAL SURVEY,
Washington, November 29, 1905.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: Supplementing my letter of November 27 in relation to the Rio Grande project, I have the honor to submit the following recommendations, based upon my understanding of the policy outlined in your letter of November 8 regarding the Teton project, and your instructions of November 28 on the Carlsbad project.

First, it is recommended that the sum of \$200,000 be allotted to the immediate construction of the Leasburg diversion dam and canal;

Second, it is also recommended that the usual form of contract be entered into with the water users' associations, named in my letter of November 27, guaranteeing the return to the Government of all expenditures made under the terms of the Reclamation Act.

Respectfully yours,

(Signed) CHAS. D. WALCOTT,
Director.

OFFICE OF THE SECRETARY,
Washington, December 2, 1905.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: I am in receipt of your communication of the 27th ultimo replying to Departmental letter of the 25th ultimo relative to the Rio Grande Project; also your letter of November 29th in regard to the Leasburg diversion dam and canal is at hand.

In your said letter of the 29th instant you recommend as follows:

First, it is recommended that the sum of \$200,000 be allotted to the immediate construction of the Leasburg diversion dam and canal.

Second, it is also recommended that the usual form of contract be entered into with the water users' associations, named in my letter of November 27, guaranteeing the return to the Government of all expenditures made under the terms of the Reclamation Act.

On the same date as that of your last mentioned letter, I had a conference with Mr. Holt, President of the Elephant Butte Water Users' Association of New Mexico and Mr. Martinez, Chairman of the Executive Committee of the El Paso Valley Water Users' Association, and other gentlemen from that locality relative to the construction of the Leasburg diversion dam and canal. As a result of that conference these gentlemen, speaking for the water users' associations and those who will be benefited by the construction of said diversion dam, stated to the Department that rather than fail in securing favorable action on the request for an appropriation sufficient to construct said dam, a satisfactory guaranty would be given the Department that all moneys expended, up to \$200,000, for the construction of said dam from the Reclamation Fund should be returned to that fund in two years.

In view of the above and foregoing and of your recommendations of the 29th ultimo, and on the condition that the return in two years of all moneys expended from the Reclamation Fund, up to \$200,000, for the construction of said dam and canal be guaranteed by an appropriate instrument in writing, the form of which shall be submitted to the Department for its consideration at the earliest practicable date, with such suggestions and recommendations as you may deem advisable in the premises, \$200,000 is hereby allotted and appropriated from the Reclamation Fund for the immediate construction of the Leasburg diversion dam and canal.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

TREATY WITH MEXICO REGARDING THE RIO GRANDE

Convention between the United States and Mexico, providing for the equitable distribution of the waters of the Rio Grande for irrigation purposes

[Signed at Washington, May 21, 1906; ratification advised by the Senate June 26, 1906; ratified by the President December 26, 1906; ratified by Mexico January 5, 1907; ratifications exchanged at Washington January 16, 1907; proclaimed January 16, 1907; 34 Stat. 2953]

By the President of the United States of America

A PROCLAMATION

Whereas a convention between the United States of America and the United States of Mexico, providing for the equitable distribution of the waters of the Rio Grande for irrigation purposes, and to remove all causes of controversy between them in respect thereto, was concluded and signed by their respective plenipotentiaries at Washington on the 21st day of May, 1906, the original of which convention, being in the English and Spanish languages, is word for word as follows:

The United States of America and the United States of Mexico being desirous to provide for the equitable distribution of the waters of the Rio Grande for irrigation purposes, and to remove all causes of controversy between them in respect thereto, and being moved by considerations of international comity, have resolved to conclude a convention for these purposes and have named as their plenipotentiaries:

The President of the United States of America, Elihu Root, Secretary of State of the United States; and

The President of the United States of Mexico, His Excellency Senor Don Joaquin D. Casasus, ambassador extraordinary and plenipotentiary of the United States of Mexico at Washington.

Who, after having exhibited their respective full powers, which were found to be in good and due form, have agreed upon the following articles:

ARTICLE 1. After the completion of the proposed storage dam near Engle, N. Mex., and the distributing system auxiliary thereto, and as soon as water shall be available in said system for the purpose, the United States shall deliver to Mexico a total of 60,000 acre-feet of water annually, in the bed of the Rio Grande at the point where the head works of the Acequia Madre, known as the Old Mexican Canal, now exist above the city of Juarez, Mexico.

ART. 2. The delivery of the said amount of water shall be assured by the United States and shall be distributed through the year in the same proportions as the water supply proposed to be furnished from the said irrigation system to lands in the United States in the vicinity of El Paso, Tex., according to the following schedule, as nearly as may be possible:

	Acre-feet per month	Corresponding cubic feet of water		Acre-feet per month	Corresponding cubic feet of water
January.....	0	0	August.....	4,370	190,357,200
February.....	1,090	47,480,400	September.....	3,270	142,441,200
March.....	5,460	237,837,600	October.....	1,090	47,480,400
April.....	12,000	522,720,000	November.....	540	23,522,400
May.....	12,000	522,720,000	December.....	0	0
June.....	12,000	522,720,000			
July.....	8,180	356,320,800	Total for the year..	60,000	2,613,600,000

In case, however, of extraordinary drought or serious accident to the irrigation system in the United States, the amount delivered to the Mexican Canal shall be diminished in the same proportion as the water delivered to lands under said irrigation system in the United States.

ART. 3. The said delivery shall be made without cost to Mexico, and the United States agrees to pay the whole cost of storing the said quantity of water to be delivered to Mexico, of conveying the same to the international line, of measuring the said water, and of delivering it in the river bed above the head of the Mexican Canal. It is understood that the United States assumes no obligation beyond the delivering of the water in the bed of the river above the head of the Mexican Canal.

ART. 4. The delivery of water as herein provided is not to be construed as a recognition by the United States of any claim on the part of Mexico to the said waters; and it is agreed that in consideration of such delivery of water Mexico waives any and all claims to the waters of the Rio Grande for any purpose whatever between the head of the present Mexican Canal and Fort Quitman, Tex., and also declares fully settled and disposed of, and hereby waives, all claims heretofore asserted or existing, or that may hereafter arise, or be asserted, against the United States on account of any damages alleged to have been sustained by the owners of land in Mexico by reason of the diversion by citizens of the United States of waters of the Rio Grande.

ART. 5. The United States in entering into this treaty does not thereby concede, expressly or by implication, any legal basis for any claims heretofore asserted or which may be hereafter asserted by reason of any losses incurred by the owners of land in Mexico due or alleged to be due to the diversion of the waters of the Rio Grande within the United States; nor does the United States in any way concede the establishment of any general principle or precedent by the concluding of this treaty. The understanding of both parties is that the arrangement contemplated by this treaty extends only to the portion of the Rio Grande which forms the international boundary from the head of the Mexican Canal down to Fort Quitman, Tex., and in no other case.

ART. 6. The present convention shall be ratified by both contracting parties in accordance with their constitutional procedure, and the ratification shall be exchanged at Washington as soon as possible.

In witness whereof the respective plenipotentiaries have signed the convention, both in the English and Spanish languages, and have thereunto affixed their seals.

Done in duplicate at the City of Washington this 21st day of May, 1906.

ELIHU ROOT. [SEAL.]
JOAQUIN D. CASASUS. [SEAL.]

And whereas the said convention has been duly ratified on both parts, and the ratifications of the two Governments were exchanged in the city of Washington on the 16th day of January 1907:

Now, therefore, be it known that I, Theodore Roosevelt, President of the United States of America, have caused the said convention to be made public, to the end that the same and every article and clause thereof may be observed and fulfilled with good faith by the United States and the citizens thereof.

In testimony whereof I have hereunto set my hand and caused the seal of the United States of America to be affixed.

Done at the city of Washington, this 16th day of January, in the year of our Lord 1907, and of the independence of the United States of America the one hundred and thirty-first.

THEODORE ROOSEVELT,
President.

[SEAL.]

By the President:

ELIHU ROOT,

Secretary of State.

PROVISIONS OF SUNDRY CIVIL EXPENSES APPROPRIATION ACT, 1908

[Extract from] An act making appropriations for sundry civil expenses of the Government for the fiscal year ending June 30, 1908, and for other purposes. (Act of March 4, 1907, 34 Stat. 1295, 1357, Public Law 253, 59th Cong., 2d sess.)

* * * That the following sums be, and the same are hereby, appropriated, for the objects hereinafter expressed, for the fiscal year ending June thirtieth, nineteen hundred and eight, namely:

* * * * * * *

Convention with Mexico.—Toward the construction of a dam for storing and delivering sixty thousand acre-feet of water annually, in the bed of the Rio Grande at the point where the headworks of the Acequia Madre now exists, above the city of Juarez, Mexico, as provided by a convention between the United States and Mexico, proclaimed January sixteenth, nineteen hundred and seven, one million dollars, to be available as needed and to be expended under the direction of the Secretary of the Interior in connection with the irrigation project on the Rio Grande: *Provided*, That the balance of the cost of said irrigation project over and above the amount herein appropriated shall be allotted by the Secretary of the Interior as may be needed and as may be available from time to time from the Reclamation Fund and collected from the settlers and owners of the land benefited under the provisions of the Reclamation Act approved June seventeenth, nineteen hundred and two, and acts supplemental thereto or amendatory thereof.

ELEPHANT BUTTE POWER ¹

PROVISIONS OF INTERIOR DEPARTMENT APPROPRIATION ACT, 1938

[Extracts from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1938, and for other purposes. (Act of August 9, 1937, 50 Stat. 564, 566, and 592-597, Public Law 249, 75th Cong., 1st sess.)

* * * That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, for the De-

¹ Construction of a powerplant at Elephant Butte Dam with PWA funds was approved by the President on June 21, 1938.

partment of the Interior for the fiscal year ending June 30, 1938, namely:

* * * * *

Rio Grande project, New Mexico-Texas: For operation and maintenance, \$350,000; *Provided*, That the Secretary of the Interior is hereby authorized to enter into a contract with the El Paso County Water Improvement District Numbered 1 and the Elephant Butte Irrigation District of New Mexico by which the districts will be relieved of the obligation of making payment of the construction cost chargeable to the development of power of Elephant Butte Dam in the amount determined as equitable by the Secretary of the Interior in return for the conveyance by the said two districts to the United States of all the districts' right, title, interest, and estate in the use of said dam and other project works, including the project water supply, for the development of hydroelectric energy: *Provided further*, That in such contracts it shall be stated that the use of the dam, project works, and water supply for power purposes shall not deplete or interfere with the use thereof for irrigation purposes: *Provided further*, That the net earnings of the power plant and system belonging to the United States and any other available revenues shall be applied, until the cost thereof has been met, upon the cost of the power development, including (1) the cost of power facilities, (2) the amount invested, as herein authorized, in the cost of Elephant Butte Dam, and (3) the amount invested by the Bureau of Reclamation in Caballo Dam: *Provided further*, That after the cost of the power development has been met the net earnings of the power plant and system shall be disposed of as Congress may direct. * * *

CANALIZATION PROJECT

An act authorizing construction, operation, and maintenance of Rio Grande canalization project and authorizing appropriation for that purpose. (Act of August 29, 1935, 49 Stat. 961, Public Law 392, 74th Cong., 1st sess.)

SEC. 1. That upon the completion of the engineering investigation, study, and report to the Secretary of State, as heretofore authorized by Public Resolution Numbered 4, Seventy-fourth Congress, approved February 13, 1935, the Secretary of State, acting through the American Section, International Boundary Commission, United States and Mexico, in order to facilitate compliance with the convention between the United States and Mexico concluded May 21, 1906, providing for the equitable division of the waters of the Rio Grande, and to properly regulate and control, to the fullest extent possible, the water supply for use in the two

countries as provided by treaty, is authorized to construct, operate, and maintain, in substantial accordance with the engineering plan contained in said report, a diversion dam in the Rio Grande wholly in the United States, with appurtenant connections to existing irrigation systems, and to acquire by donation, condemnation, or purchase such real and personal property as may be necessary therefor.

SEC. 2. There is authorized to be appropriated the sum of \$1,000,000 for the purposes of carrying out the provisions of section 1 hereof, other than for operation and maintenance, including salaries and wages, fees for professional services; rents, travel expenses; per diem in lieu of actual subsistence; printing and binding, law books and books of reference: *Provided*, That the provisions of section 3709 of the Revised Statutes (U. S. C., title 41, sec. 5) shall not apply to any purchase made or service procured when the aggregate amount involved is \$100 or less; purchase, exchange, maintenance, repair, and operation of motor-propelled, passenger-and-freight-carrying vehicles; hire with or without personal services, of work animals and animal-drawn and motor-propelled vehicles and equipment; acquisition by donation, condemnation, or purchase of real and personal property; transportation (including drayage) of personal effects of employees upon change of station; telephone, telegraphic, and air-mail communications; rubber boots for official use by employees; ice; equipment, services, supplies, and materials and other such miscellaneous expenses as the Secretary of State may deem necessary properly to carry out the provisions of the act: *Provided*, That any part of any appropriation made hereunder may be transferred to, for direct expenditure, by the Department of the Interior pursuant to such arrangements therefor as may be from time to time effected between the Secretary of State and the Secretary of the Interior, or as directed by the President of the United States.

An act authorizing construction, operation, and maintenance of Rio Grande canalization project and authorizing appropriation for that purpose. (Act of June 4, 1936, 49 Stat. 1463, Public Law 648, 74th Cong., 2d sess.)

SEC. 1. That upon the completion of the engineering investigation, study, and report to the Secretary of State, as heretofore authorized by Public Resolution Numbered 4, Seventy-fourth Congress, approved February 13, 1935, the Secretary of State, acting through the American Section, International Boundary Commission, United States and Mexico, in order to facilitate compliance with the convention between the United States and Mexico concluded May 21, 1906, providing for the equitable division of the waters of the Rio Grande, and to properly regulate and control, to the fullest extent possible, the water supply for use in the two countries as provided by treaty, is authorized to construct, operate, and maintain, in substantial accordance with the engineering plan contained in said report, works for the canalization of the Rio Grande from the Caballo Reservoir site in New Mexico

to the international dam near El Paso, Tex., and to acquire by donation, condemnation, or purchase such real and personal property as may be necessary therefor.

SEC. 2. There is authorized to be appropriated the sum of \$3,000,000 for the purposes of carrying out the provisions of section 1 hereof, other than for operation and maintenance, including salaries and wages, fees for professional services; rents; travel expenses; per diem in lieu of actual subsistence; printing and binding, law books, and books of reference: *Provided*, That the amount herein authorized to be appropriated shall include so much as may be necessary for completion of construction of the diversion dam in the Rio Grande wholly in the United States, in addition to the \$1,000,000 authorized to be appropriated for this purpose by the Act of August 29, 1935 (49 Stat. 961): *Provided further*, That the total cost of construction of said diversion dam and canalization works shall not exceed \$4,000,000: *Provided further*, That the provisions of section 3709 of the Revised Statutes (U. S. C., title 41, sec. 5) shall not apply to any purchase made or service procured when the aggregate amount involved is \$100 or less; purchase, exchange, maintenance, repair and operation of motor-propelled, passenger-and-freight-carrying vehicles; hire with or without personal services, of work animals and animal-drawn and motor-propelled vehicles and equipment; acquisition by donation, condemnation, or purchase of real and personal property; transportation (including drayage) of personal effects of employees upon change of station; telephone, telegraphic, and air-mail communication; rubber boots for official use by employees; ice; equipment, service, supplies, and materials and other such miscellaneous expenses as the Secretary of State may deem necessary properly to carry out the provisions of the act: *And provided further*, That any part of any appropriation made hereunder may be transferred to, for direct expenditure by, the Department of the Interior pursuant to such arrangements therefor as may be from time to time effected between the Secretary of State and the Secretary of the Interior, or as directed by the President of the United States.

RIVERTON PROJECT

WYOMING

The Riverton project was started as an Indian reclamation project pursuant to the Indian Appropriation Act of March 2, 1917 (39 Stat. 969, 993), and placed under jurisdiction of the Bureau of Reclamation by the act of June 5, 1920 (41 Stat. 874, 915). Extensions of the project were reauthorized as part of the Missouri River Basin project under the provisions of the Flood Control Acts of 1944 and 1946.

INDIAN BUREAU APPROPRIATION ACTS, 1917 AND 1919

[Extract from] An act making appropriations for the current and contingent expenses of the Bureau of Indian Affairs, for fulfilling treaty stipulations with various Indian tribes, and for other purposes, for the fiscal year ending June thirtieth, nineteen hundred and eighteen. (Act of March 2, 1917, 39 Stat. 969, 993, Public Law 369, 64th Cong., 2d sess.)

* * * That the following sums be, and they are hereby, appropriated, out of any money in the Treasury not otherwise appropriated,

* * * * *

For continuing the work of constructing an irrigation system within the diminished Shoshone or Wind River Reservation, in Wyoming, including the Big Wind River and Dry Creek Canals, and including the maintenance and operation of completed canals, \$150,000, and to enable the Secretary of the Interior to make such additional surveys and examinations as may be required for the purpose of preparing and submitting with the estimates to be submitted before the first regular session of the Sixty-fifth Congress of an estimate for the beginning of construction of a project for the watering of a portion of the conditionally ceded lands of the Wind River Reservation, in substantial accordance with the plan outlined in House Document Numbered Seventeen hundred and sixty-seven, of the Sixty-fourth Congress, second session, or such modification of such plan as the said Secretary may approve, \$5,000, reimbursable in accordance with the provisions of the act of March third, nineteen hundred and five, and to remain available until expended.

[Extract from] An act making appropriations for the current and contingent expenses of the Bureau of Indian Affairs, for fulfilling treaty stipulations with various Indian tribes, and for other purposes, for the fiscal year ending June thirtieth, nineteen hundred and nineteen. (Act of May 25, 1918, 40 Stat. 561, 590-591, Public Law 159, 65th Cong., 2d sess.)

* * * That the following sums be, and they are hereby, appropriated, out of any money in the Treasury not otherwise appropriated, for the purpose of paying the current and contingent expenses of the Bureau of Indian Affairs, for fulfilling treaty stipulations with various Indian tribes, and in full compensation for all offices and salaries which are provided for herein for the service of the fiscal year ending June thirtieth, nineteen hundred and nineteen, namely:

* * * * *

For continuation of investigations, beginning of construction and incidental operations on a project for the irrigation of a portion of the conditionally ceded lands of the Wind River Reservation, Wyoming, \$100,000, reimbursable in accordance with the provisions of the act of March third, nineteen hundred and five, and to remain available until expended: *Provided*, That the construction charge for the actual cost of said project shall be fixed by the Secretary of the Interior and divided equitably between the Indian land and public and private land irrigated by such project, and that the charge as fixed for said Indian lands shall be reimbursable in accordance with the provisions of the act of March third, nineteen hundred and five, and that the charges as fixed for private and public land irrigated under such project shall be paid by the owner or entryman in accordance with the terms of payment of construction and maintenance charges as provided by the reclamation law and amendments thereto.

OFFICE OF THE SECRETARY,
Washington, June 19, 1918.

The DIRECTOR OF THE RECLAMATION SERVICE.

DEAR MR. DIRECTOR: Your attention is called to an item found on page 33 of the Indian Appropriation Act, Public #159, carrying an appropriation of \$100,000 "for continuation of investigations, beginning of construction and incidental operations on a project for the irrigation of a portion of the conditionally ceded lands of the Wind River Reservation, Wyoming." It is the understanding of this Department and of the Indian Office, that this work is to be conducted by the Reclamation Service in a similar manner to work heretofore performed by the Reclamation Service upon Indian irrigation projects. You will, therefore, please

take the necessary steps, or make the necessary report and recommendations to the Department, to carry the requirements of the law described into effect.

Very truly yours,

(Signed) ALEXANDER T. VOGELSANG,
Acting Secretary.

PROVISIONS OF INTERIOR DEPARTMENT APPROPRIATION ACT, 1921

[Extract from] An act making appropriations for sundry civil expenses of the Government for the fiscal year ending June 30, 1921, and for other purposes. (Act of June 5, 1920, 41 Stat. 874, 913, 915, Public Law 246, 66th Cong., 2d sess.)

* * * That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, for the fiscal year ending June 30, 1921, namely:

The following sums are appropriated out of the special fund in the Treasury of the United States created by the act of June 17, 1902, and therein designated "the Reclamation Fund":

* * * * *

Riverton project, Wyoming: For the reclamation of lands within and in the vicinity of the ceded portion of the Wind River or Shoshone Reservation, including operation and maintenance, continuation of construction, and incidental operations, \$100,000: *Provided*, That said lands shall be subject to all the charges, terms, conditions, provisions, and limitations of the Reclamation Act and acts amendatory thereof or supplementary thereto, and suitable provision shall be made by the Secretary of the Interior in fixing the charges to provide for reimbursement of the entire expenditure in accordance with the Reclamation law and other laws applicable to said lands.

ROGUE RIVER BASIN PROJECT

OREGON

TALENT DIVISION

The Talent Division of the Rogue River Basin Project was approved by the Secretary of the Interior on June 3, 1954, and authorized by Congress, together with the rehabilitation of the works of the Medford and Rogue River Valley Irrigation Districts, on August 20, 1954 (68 Stat. 752, Public Law 606, 83d Cong., 2d sess.).

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D. C., March 17, 1954.

THE SECRETARY OF THE INTERIOR.

SIR: This is my proposed report on the Talent division, Rogue River Basin project, Oregon. It is based on and includes the accompanying report of the regional director, Boise, Idaho.

The Talent division is located in Jackson County of southwestern Oregon. Project lands lie along the Bear Creek, a tributary to the Rogue River, in the general vicinity of the city of Ashland and the towns of Talent and Phoenix. This multipurpose development is primarily for irrigation but also produces hydroelectric power, flood control, and incidental fish and wildlife, and recreation benefits.

There is substantial need in the project area for supplemental water for presently irrigated lands and the development of new irrigated lands from the water supply that the proposed development would make available. This is a locality with a large percentage of small farms with off-farm income playing an important role in the economy. A full water supply would furnish additional income to farmers on the small tracts and would provide for optimum use of the available water resource which, as a result of population increase, is important to the economy of the region.

Lands developed along Bear Creek for agricultural, industrial, commercial, and residential purposes are subject to flooding almost every winter. This flood damage would be substantially reduced as a result of enlarging the existing Emigrant Reservoir as part

of the proposed plan. Hydroelectric power and energy that would be made available would provide a modest but valuable addition to help serve the anticipated power requirements of the area. The inhabitants have recognized the value of this development to their general welfare and there is concerted local agreement for early construction. The construction of this division would be economically justified in that the estimated annual benefits exceed the estimated annual costs by the ratio of 1.3 to 1.

The plan provides for an adequate water supply for 17,890 acres of irrigable land of which 9,250 would receive a supplemental supply and 8,640 would be newly irrigated lands and receive a full supply. In addition, the plan would develop 10,000 kilowatts of nominal prime power by integration of the proposed division powerplant with the Columbia River power system. Studies are now under way to increase this capacity to 16,000 kilowatts and a supplemental report on this will be made available in the near future.

The division plan is primarily an extension to the works of the Talent Irrigation District. Existing facilities of this district would be used to as great an extent as possible and enlarged as required. Emigrant Reservoir would be increased in size from 8,300 to 45,000 acre-feet capacity, as would the lengths and capacities of the existing major canals and laterals. Hyatt Prairie Reservoir would be utilized at its present size. Major new water-collection facilities would consist of Howard Prairie Dam and Reservoir, 60,500 acre-feet capacity, a system of collection canals for diverting and conveying water from the Little Butte Creek watershed into Howard Prairie Reservoir, and the Howard Prairie delivery canal and tunnel for conveying the reservoir water and other flows of Beaver and Jenny Creeks, of the upper Klamath River watershed, across the Cascade Divide into Bear Creek. This canal and tunnel would also convey Hyatt Prairie Reservoir water. In dropping from the Cascade Divide to the enlarged Emigrant Reservoir, where it would be reregulated, the water would pass through the proposed Green Springs powerplant.

The proposed plan will require transbasin diversion of water to be successful. Studies indicate that the required supply is available and there would be no apparent conflict with existing rights. The State engineer of Oregon has expressed his approval of the proposed use of water as set forth in this report.

The estimated cost of the development based on January 1953 prices is \$19,894,000. Annual operation, maintenance and replacement costs would amount to \$150,500, of which \$85,900 is allocated to irrigation and \$64,600 to power.

The allocations of the \$19,894,000 to irrigation, power and flood control are respectively \$12,971,000, \$6,286,000, and \$637,000. The latter amount is nonreimbursable in accordance with law. It is estimated that the amount allocated to power including interest during construction could be repaid from net power revenues in 49 years with interest at 2½ percent. For the water users to pay out the irrigation allocation, 70 years would be required with the aid of net power revenues after the 49th year. It is estimated that the irrigators, in addition to paying annual operation, mainte-

nance, and replacement costs and a bonded debt with interest due on existing works, would be able to repay in the 70-year period approximately \$7,870,000 of the capital costs allocated to irrigation. Aid to irrigation from net power revenues would amount to about \$5,101,000.

During an interim period, it is proposed to defer development of 2,680 irrigable acres under the Phoenix Canal in the division and to use the water (9,000 acre-feet) on the Medford and Rogue River Valley Irrigation Districts to supplement their present inadequate supplies until an alternative source of supply can be developed. No new construction would be required to accomplish this temporary arrangement, inasmuch as the water would be released into Bear Creek for use by the District through existing facilities. The charges for the 9,000 acre-feet of water would be on the same basis as if the 2,680 acres of division land were included and would maintain feasibility of the plan.

Present plans include but a very small amount (\$10,000) for fish and wildlife facilities. Studies will continue on fish and wildlife resources affected by this development and any reasonable expenditures found necessary by the Secretary for this purpose will, in final analysis, be considered nonreimbursable in accordance with existing law.

The National Park Service concludes that recreational development in the Talent division would not be of national significance. The regional director, therefore, in the absence of commitment by local interests for repayment of recreation costs and in accordance with Bureau of the Budget Circular A-47 omits recreational facilities from the plan of development recommended. However, it is believed that construction of minimum basic recreation facilities necessary to provide access, sanitation, and safety for immediate public use and for protection of the area should be undertaken as part of the project costs on a nonreimbursable basis. Accordingly, the regional director's report is hereby amended in this respect.

Except as modified with regard to fish and wildlife costs and recreation facilities, I concur in and adopt the recommendations of the regional director as set forth in paragraph 41 of his report.

I recommend that you approve and adopt this report as your proposed report on the Talent division and that you authorize me in your behalf to transmit copies to the States of Oregon and California and to the Secretary of the Army, in accordance with requirements of the Flood Control Act of 1944 (58 Stat. 887), to the State of Oregon for the views and recommendations of the head of the agency exercising administration over the wildlife resources of that State, in accordance with provisions of the act of August 14, 1946 (60 Stat. 1080), and to the other interested Federal agencies for their comments.

Respectfully,

(Signed) W. A. DEXHEIMER,
Commissioner.

Approved and adopted: April 1, 1954.

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D. C., June 3, 1954.

The SECRETARY OF THE INTERIOR.

SIR: This is my report on the Talent division, Rogue River Basin project, Oregon. It is based on and includes the proposed report on this project which you approved and adopted on April 1, 1954.

Copies of your proposed report were transmitted to the States of California and Oregon and to the Secretary of the Army in accordance with provisions of section 1 (c) of the Flood Control Act of 1944 (58 Stat. 887) and to the State of Oregon for comments of the head of the agency exercising administration over the wildlife resources of that State in accordance with provisions of the act of August 14, 1946 (60 Stat. 1080). Copies of the report were sent also to the agencies represented on the Federal Inter-agency River Basin Committee for their comments. Comments have been received from all States and agencies to which the report was sent and copies are attached.

In view of the generally favorable nature of the comments received it does not appear that revision of your proposed report, as a result of the review of the various agencies, is necessary. In particular, the State of Oregon indicated that it had followed the surveys and investigations of the Talent division since their initiation and recommended that the report be approved.

Certain comments of the Department of Agriculture, while factually correct and seemingly adverse, are irrelevant when considered within the context of reclamation law and policy. That Department observed that the payments made by water users during the first 48 years of the repayment period amount to a return of about nine-tenths of 1 percent on the Federal investment and that the present value at $2\frac{1}{2}$ percent interest of all repayments toward the irrigation investment by irrigators and from power revenues is equal to about 37 percent of the project costs allocated to irrigation. The Congress, in the enactment of basic reclamation law and in the authorization of individual reclamation projects has firmly established many times over that the repayment of the irrigation costs of Federal projects is to be on an interest-free basis. In the light of these congressional actions the observations of the Department of Agriculture would be appropriately stated thusly: "The payments made by the water users during the first 48 years of the repayment period amount to a return of about 44 percent of the irrigation investment and their payments during the rest of the 70-year period combined with financial assistance from power revenue fully return the remaining irrigation investment." This is entirely consistent with reclamation policy as expressed in the laws.

The Department of Agriculture also states that the allowance of 30 percent for farm losses and waste used in estimating farm delivery requirements appears low. The 30 percent allowance is, to a certain extent, a judgment factor. Based upon our experience and upon losses sustained by existing irrigation operations in the area,

this allowance appears adequate and no additional special costs are needed for this item.

Since your approval and adoption of the report on the Talent division as your proposed report on April 1, 1954, agreement has been reached by the Departments of the Army and Interior and the Federal Power Commission on methods of cost allocation for multiple-purpose water resource development projects. Application of the separable costs-remaining benefits method, which is the preferred method set forth in the agreement, to the Talent division would result in the following allocations:

Item	Allocations presented in proposed report	Allocations under separable costs-remaining benefits method
Irrigation.....	\$12,971,000	\$12,440,000
Power.....	6,286,000	6,859,000
Flood control.....	637,000	595,000
Total.....	19,894,000	19,894,000

Under this method of allocation the power generated would have to be sold at an average rate of 4.76 mills per kilowatt-hour to amortize the power investment plus interest during construction in 50 years at 2½ percent interest rather than at 4.5 mills per kilowatt-hour as shown in the report. It is anticipated that power can be sold at the average 4.76 mill rate and the power costs returned with interest within 50 years. Payout of the irrigation investment through payments by the irrigators and assistance from power revenues after amortization of power costs would still be accomplished within 70 years.

It is expected that a supplemental report will be completed shortly covering a proposal to increase the power capacity of the Talent division from 10,000 to 16,000 kilowatts. Should the enlarged plant prove more feasible than the plan contained in the present report, the repayment aspects of the Talent division would, of course, be more favorable.

In the interim I recommend that the plan presented in your proposed report be revised to incorporate the new cost allocations and repayment computations.

Accordingly, I recommend that you approve and adopt the report which you approved on April 1, 1954, as modified by this letter, as your report on the Talent division, Rogue River Basin project, Oregon, and that you transmit it, together with the attached comments, to the President and, subsequently, to the Congress in accordance with the provisions of the Reclamation Project Act of 1939.

Respectfully,

(Signed) W. A. DEXHEIMER,
Commissioner.

Approved and adopted: June 3, 1954.

(Signed) RALPH A. TUDOR,
Acting Secretary of the Interior.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., June 3, 1954.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: My report on the Talent division, Rogue River Basin project, Oregon, is transmitted herewith pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

The Talent division would provide water badly needed to supplement the supplies for existing irrigation in the general vicinity of the city of Ashland, Oreg., and to develop new irrigated lands in the same area. In addition it would provide hydroelectric power, flood control, and incidental fish and wildlife and recreation benefits. Based on January 1953 prices it is estimated to cost \$19,894,000 and it is economically justified with estimated benefits exceeding estimated costs in the ratio of 1.3 to 1. For the past several years local interests have been strongly in favor of its authorization and construction. I recommend that the Talent division be authorized as set forth in the report.

The report has been transmitted to officials of the States of California and Oregon and to the Secretary of the Army for their views and recommendations as required by the provisions of section 1 (c) of the Flood Control Act of 1944 (58 Stat. 887). It was sent also to the State of Oregon for the comments of the head of the agency exercising administration over the wildlife resources of the State, as required by the provision of the act of August 14, 1946 (60 Stat. 1080); and to the Departments of Agriculture, Commerce, Labor, and Health, Education, and Welfare, and the Federal Power Commission, in accordance with interagency agreements. All reviewing agencies have submitted comments and copies of the comments are enclosed with the report.

I shall appreciate having advice concerning the relationship of the Talent division, Rogue River Basin project, Oregon, to your program before I transmit the report to the Congress for its consideration and appropriate action in accordance with the provisions of the Reclamation Project Act of 1939.

Sincerely yours,

(Signed) RALPH A. TUDOR,
Acting Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington 25, D. C., June 11, 1954.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This will acknowledge your letter to the President of June 3, 1954, requesting advice concerning the relationship of your proposed report on the Talent division, Rogue River Basin project, Oregon, to the program of the President.

The proposed project is primarily an extension of the works of the private Talent Irrigation District which lies in a locality of small farms with off-farm income playing an important role in the economy. It would provide an adequate water supply for 17,890 acres of irrigable land, of which 9,250 would receive a supplemental supply and 8,640 would be newly irrigated lands and receive a full supply. The plan provides for development of 10,000 kilowatts of nominal prime power. Flood damage to farms as well as industrial, commercial and residential property would be reduced. Existing facilities of the Talent Irrigation District works would be used insofar as possible. Emigrant Reservoir would be enlarged from 8,300 to 45,000 acre-feet capacity. Major new construction would include: the Howard Prairie Dam and Reservoir with a capacity of 60,500 acre-feet, a system of canals and conduits, and the Green Springs 10,000-kilowatt powerplant.

The total cost of the project is estimated at \$19,894,000, based on January 1953 price levels and is allocated as follows: irrigation \$12,440,000, and power, \$6,859,000—reimbursable; and flood control, \$595,000—nonreimbursable. For purposes of economic analysis the construction cost is adjusted to \$20,957,000 by deducting investigation costs made prior to June 30, 1953, and credits for salvage value, and adding interest during construction. Based on amortization over 50 years at 2½ percent, the annual construction cost is estimated to be \$738,900. The annual operation, maintenance, and replacement costs, as set forth in the regional director's report, are \$85,900 for irrigation and \$64,600 for power, resulting in a total annual cost of \$889,400. Average annual benefits are estimated at \$940,100, of which \$702,280 are classified as direct benefits and \$237,820 as indirect benefits. The benefit-cost ratios are 1.06 based on total benefits and 0.79 based on direct benefits.

The regional director, in his report of December 1953, states that the irrigation water users would be able to make annual payments of \$199,000 per year, based on \$11.48 per acre for the 9,250 acres of presently irrigated lands and about \$10.74 per acre for the 8,640 acres of newly irrigated lands. In addition, the city of Ashland will pay \$1,500 annually for alleviating acute shortages in its water supply system in late summer months. After subtracting the irrigation operation, maintenance, and replacement cost of \$85,900, a balance of \$114,600 would be available

to apply on construction costs and bond repayment. The California-Oregon Power Co. is reported to have made an informal offer to purchase the entire plant output at 4½ mills per kilowatt-hour. The Commissioner of Reclamation states that the power would have to be sold at an average rate of 4.76 mills per kilowatt-hour, rather than the 4.5 mills estimated in the regional director's report, in order to amortize the power investment, plus interest during construction, in 50 years at 2½ percent interest. In the 50 years required to amortize the power investment, water users would repay \$5,730,000 of the irrigation construction costs, \$128,000 of outstanding bonds, and \$23,980 of interest on bonds. Combined annual power revenues and repayments by water users, totaling \$373,442, exclusive of operation and maintenance costs, would retire the balance of \$6,861,980 in about 18 additional years, making the total payout period about 68 years.

The State of Oregon recommends that the project be approved, and California has no objection. The Department of the Army has no objection although its letter of May 18, 1954, states that on the basis of the benefits that would result from the flood-control storage an amount of \$566,000 has been allocated to flood-control features as compared with the Department of the Interior allocation of \$595,000. The Department of Commerce assumes that adequate provision is being made to have the Federal water project bear its full share of the necessary highway relocation costs.

The Federal Power Commission estimates power benefits above those used in the Interior report. The Department of Health, Education, and Welfare recommends that provision be made to take care of the necessary sewage, sanitary and mosquito control facilities if the reservoirs are built.

The Department of Agriculture states that the project costs allocated to irrigation, averaging \$708 an acre, seems high in view of the average increase in gross annual income of about \$27 per acre, an average net annual income of \$12 per acre, or a 1.7 percent return. The Department also points out that the payments made by water users during the first 48 years would amount to a return of only about nine-tenths of 1 percent on the Federal investment and, on a present-worth basis, all repayments toward the irrigation investment by irrigators and from power revenues over the life of the project is equal to about 37 percent of the project costs allocated to irrigation. It also questions the estimates of water losses used in planning the irrigation system and suggests that before construction commences, plans for the project and for the management of the Rogue River National Forest be coordinated.

On the basis of the information submitted to us and provided the power can be sold at the contemplated rate of 4.76 mills per kilowatt-hour, the proposed powerplant would be economically feasible. The irrigation features, however, appear to be very costly when compared with the modest increases in agricultural production and the direct agricultural benefits. Our analysis of the report discloses that while direct annual benefits would average about \$21 per acre, the cost per acre would be \$31 per acre

on the basis of amortization of the irrigation investment in 50 years. This results in a benefit-cost ratio of less than unity. Therefore, it would seem that construction of this project would, to a considerable extent, have to be justified by other benefits which may be associated with it.

The report sets forth certain indirect benefits which the Department believes will accrue from the project, but makes no provision for recapturing the costs of these benefits. For this reason, we believe it would be appropriate for this project that a conservancy district be required to be established to provide for justifiable payments by those to whom these indirect benefits of the project would accrue. This would be especially true since the average increase in net annual income of \$12 per acre will permit the water users to pay only about \$11 per acre toward the \$31 per acre cost. Even if these benefits were confirmed through such repayments the project would show a marginal economic justification of only 1.06. In addition the Bureau of the Budget believes that, under present conditions, a reasonable repayment period for Federal irrigation projects should be the useful economic life but not longer than 50 years following completion of construction, exclusive, where applicable, of a development period not exceeding 10 years.

Accordingly, you are advised that while there would be no objection to the submission of your report to the Congress subject to the above comments, authorization of the proposed project would be without objection only if provision is made to repay all reimbursable costs within a period of not to exceed 50 years. No commitment, however, can be made at this time as to when any estimate of appropriation would be submitted for construction of the project, if authorized by the Congress, since this would be governed by the President's budgetary objectives as determined by the then prevailing fiscal situation.

It is requested that a copy of this letter be included with your report when it is submitted to the Congress.

Sincerely yours,

(Signed) ROWLAND HUGHES,
Director.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., June 15, 1954.

Hon. JOSEPH W. MARTIN, JR.,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: My report on the Talent division, Rogue River Basin project, Oregon, is transmitted herewith pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

The report presents a plan for supplementing water supplies for 9,250 acres of existing irrigated lands and for the irrigation of 8,640 acres of new lands along Bear Creek, a tributary of the Rogue River. Development of hydroelectric power and provision of flood control would be associated features of the plan as would incidental benefits to recreation and fish and wildlife purposes. Estimated cost of the development is \$19,894,000 based on January 1953 prices.

Copies of the proposed report of the Secretary of the Interior were transmitted to the States of Oregon and California and to the Secretary of the Army for their views and recommendations in accordance with the provisions of section 1 of the Flood Control Act of December 22, 1944, to the State of Oregon for the report and recommendations of the agency exercising administration over wildlife resources of that State in accordance with provisions of the act of August 14, 1946, and to the agencies represented on the Federal Interagency River Basin Committee for their information and comments. Copies of all the comments which have been received are enclosed with the report.

The report and copies of all comments were transmitted to the President. A copy of the Budget Director Rowland Hughes' letter of June 11, 1954, is enclosed.

Sincerely yours,

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

An act to authorize the Secretary of the Interior to construct, operate, and maintain the Talent division of the Rogue River Basin reclamation project, Oregon. (Act of August 20, 1954, 68 Stat. 752, Public Law 606, 83d Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the purposes of furnishing water for the irrigation of approximately eighteen thousand acres of land in Jackson County, Oregon, controlling floods, and providing hydroelectric power, and for other beneficial purposes, the Secretary of the Interior is authorized to construct, operate, and maintain the Talent division of the Rogue River Basin project consisting of two principal reservoirs at the Howard Prairie and Emigrant sites, together with other necessary works for the collection, impounding, diversion, and delivery of water, the generation and transmission of hydroelectric power and operations incidental thereto, The construction, operation, and maintenance of the Talent division shall be made in accordance with the report of the Secretary of the Interior thereon dated June 3, 1954: *Provided*, That the Green Springs powerplant may be constructed with a capacity of sixteen thousand kilowatts. The Secretary is further authorized to undertake the rehabilitation of works of the Medford and Rogue River Valley Irrigation Districts as under the provisions of the Act of October 7, 1949 (63 Stat. 724), as amended.

SEC. 2. (a) In constructing, operating, and maintaining the

Talent division, the Secretary shall be governed by the Federal reclamation laws (Act of June 17, 1902; 32 Stat. 388, and Acts amendatory thereof or supplementary thereto) except as is otherwise provided in this Act.

(b) Any contract entered into under section 9, subsection (d), of the Reclamation Project Act of 1939 (53 Stat. 1187, 1193; 43 U. S. C., 1946 ed., sec. 485h), for payment of those portions of the costs of constructing, operating, and maintaining the Talent division which are properly allocable to irrigation and which are assigned to be paid by the contracting organization shall provide for the repayment of the portion of the construction cost of the division assigned to any contract unit or, if the contract unit be divided into two or more blocks, to any such block over a period of not more than sixty years, exclusive of any permissible development period, or as near thereto as is consistent with the adoption and operation of a variable payment formula which, being based on full repayment within the period stated under average conditions, permits variance in the required annual payments in the light of economic factors pertinent of the ability of the organization to pay.

(c) Notwithstanding any other provision of law to the contrary, all net revenues derived from the sale of commercial power from the Talent division shall be applied, first, to the amortization of that portion of the cost of constructing the division which is allocated to commercial power with interest on the unamortized balance thereof at the average rate (which rate shall be certified by the Secretary of the Treasury) paid by the United States on its marketable long-term securities outstanding on the date of this Act and, thereafter, to the amortization of that portion of the cost of constructing the division which is allocated to irrigation but which is beyond the ability of the contracting irrigation organization to repay as provided above. Contracts for the disposition of power from the Talent division shall be entered into with the financial objective of returning the power allocation with interest plus as much of the irrigation allocation as is beyond the ability of the water users to repay, all as hereinbefore provided, within a period of not more than sixty years.

SEC. 3. There is hereby authorized to be appropriated for construction of the Talent division and for the rehabilitation work authorized to be undertaken by section 1 of this Act, out of any moneys in the Treasury not otherwise appropriated, the sum of \$22,900,000 plus such amounts, if any, as may be required by reason of changes in construction costs as indicated by engineering cost indexes applicable to the type of construction involved therein.

SALT RIVER PROJECT

ARIZONA

The Salt River project was authorized by the Secretary under the Reclamation Act of 1902 (32 Stat. 388) on March 14, 1903; examined and reported upon by a Board of Army Engineers pursuant to section 1 of the act of June 25, 1910 (36 Stat. 835), and approved by the President January 5, 1911. For the Director's recommendation see page 12, and for the Secretary's authorization see page 14.

DEPARTMENT OF THE INTERIOR,
Washington, January 13, 1906.

THE DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: In your letter of the 11th instant, subject "Salt River Valley project, purchase of holdings of Arizona Water Co.," you recommended for reasons stated in your letter that the amount of \$375,000 be allotted to the Salt River Valley project for the construction of a diversion dam, head-works, and new canal on the upper 2 miles of the system and that the Reclamation Service be instructed to proceed with the construction of said work and to so plan that it can be used in conjunction with the present system of the Arizona Water Co. or with the new system to be built by the Government, as may be determined in the future. It is averred that the construction of these works is necessary in order to render the water to be stored in the Roosevelt Reservoir available for the Salt River Valley project, that it will not interfere with the present works or right-of-way of this portion of the canal and that the purchase of the rest of the system by condemnation or otherwise may be determined upon according to future developments. In other words, that the construction of said work is a present necessity, independent of the pending negotiations to purchase the distributing system owned and controlled by the Arizona Water Co.

After consideration of the matter your recommendation is approved, the amount of \$375,000 is allotted from the Reclamation fund to this project for the construction of the diversion dam,

head-works, and new canal as described in your said letter, and you are instructed to proceed with the work and to so plan that it can be used in conjunction with the present system of the Arizona Water Co. or with the new system to be built by the Government, as may be determined in the future.

Very respectfully,

(Signed) THOS. RYAN,
Acting Secretary.

SAN DIEGO PROJECT

CALIFORNIA

The San Diego project was an emergency project to supply water to the San Diego and Santa Margarita areas, Calif. The President designated the Inter-Departmental Committee to consider the problem. The recommendations of that committee, that the Bureau of Yards and Docks, Navy Department, perform the construction work connected with the wartime project, and that the Bureau of Reclamation complete the plans and specifications, and that the Bureau continue its relationships with the local interests looking toward completion after the war of the ultimate project under the Reclamation law, were approved by the President on November 29, 1944 and ratified by Congress on April 15, 1948 (62 Stat. 181, Public Law 482, 80th Cong.).

The San Diego (Second Barrel) was authorized by the Act of October 11, 1951 (65 Stat. 404, Public Law 171, 82d Cong., 1st sess.).

SAN JACINTO-SAN VICENTE AQUEDUCT FIRST BARREL

OFFICE OF THE SECRETARY,
Washington, October 25, 1944.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: In your letter of October 3 to Assistant Commissioner William E. Warne of the Bureau of Reclamation, whom you designated as Chairman of the Committee to consider the San Diego water supply problem, your instructions were that the report of the Committee was to be transmitted through me with my comments.

The Committee has completed its report, which is attached.

The emergency which is found with respect to the San Diego water supply system and the Santa Margarita area warrants the recommendations that are made.

While it would be possible to meet the present war needs with an emergency connection with the Colorado River Aqueduct of a capacity of 25,000,000 gallons per diem, such an installation would have no safety margin. The 50,000,000 gallon per diem aqueduct, which the Committee has recommended, will not cost materially more and will have permanent value. Tunnels (of which there are about 4 miles) and other basic structures for the recommended aqueduct should be constructed as proposed by the Committee with the ultimate capacity of 100,000,000 gallons per diem, if the cost be not unreasonably increased thereby. With regard to some of these structures, the tunnels, for example, the larger size may be actually cheaper to build.

You will note that the Committee observes that, although you have indicated that the Bureau of Reclamation should build the aqueduct needed now, the Bureau of Yards and Docks of the Navy Department, which has the paramount immediate interest, might be designated as the construction agency for the emergency project. I concur in the latter view, because I believe that it will be easier for the Bureau of Reclamation to conclude the necessary arrangements with the local interests for continued use of the aqueduct after the war, if the Bureau does not carry the responsibility of liquidating the costs of the wartime project.

I suggest, therefore, that:

1. The report of the Committee be approved.
2. The Bureau of Yards and Docks, Navy Department, perform the construction work connected with the wartime project.
3. The Bureau of Reclamation complete the plans and specifications, with cooperation and aid as needed from the Army and the Navy, and with an allotment of \$500,000, or so much therefor as may be required, from Lanham Act funds of the Federal Works Agency, and that the Bureau of Reclamation continue its relationships with the local interests looking toward completion after the war under the Reclamation Law of the ultimate project.
4. The San Diego County Water Authority and the City of San Diego be urged to press the negotiations with the Metropolitan Water District of Southern California to the end that by the conclusion of the war emergency satisfactory arrangements may have been completed with the Metropolitan District for continued use of the aqueduct.
5. The Congress be advised concerning the report and action taken, and Senator Downey sent a copy of the report.

I have had prepared letters for your consideration, if you approve the report and these suggestions. These letters follow the suggestions that I have made and accord with the report.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE.

Approved November 29, 1944.

(Signed) FRANKLIN D. ROOSEVELT,
President.

THE WHITE HOUSE,
Washington, November 29, 1944.

Hon. HENRY A. WALLACE,
President of the Senate.

MY DEAR MR. VICE PRESIDENT: An impending emergency in the water supply of San Diego County, California, has been called to my attention. Owing to the very large Naval, other military, war industrial, and war housing installations in the area, the situation is of emergency importance to the Federal Government.

At my direction, an Inter-Departmental Committee, on which the San Diego County Water Authority also had membership, reviewed the problem, and has reported to me. The War Department, the Navy Department, the Department of the Interior, and the Federal Works Agency were represented on the committee. Engineering investigations and surveys were begun in 1943 by the Bureau of Reclamation, Department of the Interior, working in cooperation with the City of San Diego, the County of San Diego, and the Federal Works Agency. Fortunately these studies had proceeded to points at which decisions could be safely made.

I am attaching¹ a copy of the report of the committee, which has been reviewed by the Secretary of the Interior and which I approve. In accordance with the recommendations of the committee, joined in by the Secretary of the Interior, I have instructed that the emergency be met in keeping with the report.

The Bureau of Reclamation has been directed to complete the plans and specifications for the construction of the aqueduct from San Jacinto, California, to the San Vicente reservoir, and the Army, Navy, and Federal Works Agency have been directed to cooperate with the Bureau to that end. The Bureau of Yards and Docks, Navy Department, has been instructed to construct the emergency water connection, with the other agencies cooperating. After the war emergency, the Bureau of Reclamation, which will continue its existing relationships with the local interests, will be in a position to assume charge of the aqueduct, and, when suitable arrangements with the local interests have been completed, to build the permanent additional works. I have asked the San Diego County Water Authority, and the city of San Diego, to press negotiations with the Metropolitan Water District of Southern California in order that an equitable arrangement may be completed for the permanent operation of the works, which will have continued value and utility.

While the emergency demanded the actions that have been taken, the Congress in the future may have submitted to it recommendations for additional work under the Reclamation Laws

¹ Excluded from this publication.

in connection with this project, and I am, therefore, submitting to you now this explanation and report.

Sincerely yours,

(Signed) FRANKLIN D. ROOSEVELT,
President.

Identical letter to Hon. Sam Rayburn, Speaker of the House of Representatives.

THE WHITE HOUSE,
Washington, November 29, 1944.

Hon. HAROLD L. ICKES,
Secretary of the Interior.

MY DEAR MR. ICKES: In response to your memorandum of October 3 with regard to the critical water supply situation in the vicinity of San Diego, California, a committee was organized, has studied the problem, and has reported to me. I have approved the report and am attaching a copy of it for your information and guidance. I have also transmitted the report to the Congress.

The Bureau of Reclamation will complete the plans and specifications for the aqueduct. It should make application to the Federal Works Agency for an allotment of \$500,000, or so much thereof as may be needed, to perform this work. The Bureau of Yards and Docks will perform the emergency construction, and I have asked the Secretary of the Navy to arrange for cooperation with the Bureau of Reclamation during the period of preparation of the plans and specifications in order that they may satisfy the Navy's needs. The post-war operation of the project will be under arrangements to be made by the Bureau of Reclamation, the Navy Department, and the local interests. The Navy Department has been asked to cooperate with your Department in this regard.

The excellent cooperation that has existed among the agencies concerned, I know will be continued.

Sincerely yours,

(Signed) FRANKLIN D. ROOSEVELT,
President.

An act relating to the construction and disposition of the San Jacinto-San Vicente aqueduct.
(Act of April 15, 1948, 62 Stat. 171, Public Law 482, 80th Cong., 2d sess.)

That the Congress hereby (1) ratifies the action taken by various departments and agencies in the executive branch of the Government in planning for and proceeding with the construction of an aqueduct running from a connection with the Colorado River aqueduct of the Metropolitan Water District of Southern Cali-

fornia near the west portal of San Jacinto tunnel in Riverside County, California, to San Vicente Reservoir in San Diego County, California; (2) authorizes the completion of such aqueduct in accordance with existing Government plans for the completion thereof; and (3) ratifies the action of the Navy Department in disposing of the aqueduct to the city of San Diego, California, pursuant to contract NOy-13300 which provides, among other things, for the leasing of such aqueduct to such city.

SECOND BARREL

An act to authorize the Secretary of the Navy to enlarge existing water-supply facilities for the San Diego, Calif., area in order to insure the existence of an adequate water supply for naval installations and defense production plants in such area. (Act of October 11, 1951, 65 Stat. 404, Public Law 171, 82d Cong., 1st sess.)

* * * That, subject to the provisions of section 3 of this act, the Secretary of the Navy, under the direction of the Secretary of Defense, is authorized and directed to provide for—

(1) such enlargement of the existing aqueduct extending from the west end of the San Jacinto tunnel of the Metropolitan Water District of Southern California to the San Vicente Reservoir in San Diego County, Calif., as may be necessary to increase the rated capacity of such existing aqueduct from 85 cubic feet per second to not less than 165 cubic feet per second, or

(2) the construction of a new aqueduct paralleling such existing aqueduct and having a rated capacity of not less than 80 cubic feet per second.

SEC. 2. The use of all water diverted through said works from the Colorado River shall be subject to and controlled by the Colorado River Compact, the Boulder Canyon Project Act, the California Self-Limitation Statute and the Mexican Water Treaty and shall be included within and shall in no way increase the total quantity of water to the use of which the State of California is entitled and limited by said compact, statutes, and treaty.

SEC. 3. No construction shall be undertaken under the authority of section 1 of this act and no funds shall be expended for the preparation of plans or specifications for any such construction unless and until the Secretary of the Navy has entered into a contract with the San Diego County Water Authority amending the contract (NOy-13300) of October 17, 1945 (providing for the completion of such existing aqueduct), to provide—

(1) for the computation of the true cost of the work performed under the authority of section 1 of this act in the same manner as provided for determining true cost in such contract of October 17, 1945;

(2) for the repayment of the true cost of the work performed under the authority of section 1 of this act, together

with interest on such amount computed at the rate certified by the Secretary of the Treasury to be the average rate paid by United States on its long-term loans, within a period of forty years after the completion and delivery to the San Diego County Water Authority of possession of the works constructed under the authority of this act: *Provided*, That repayment shall be made in annual installments of not less than one-fortieth of the true cost due when computed as herein prescribed plus annually accrued interest;

(3) that the use of all water diverted through said works from the Colorado River shall be subject to and controlled by the Colorado River Compact, the Boulder Canyon Project Act, the California Self-Limitation Statute and the Mexican Water Treaty and shall be included within and shall in no way increase the total quantity of water to the use of which the State of California is entitled and limited by the said compact, treaty, and statutes;

(4) for the conveyance by the United States to the San Diego County Water Authority of title to the works constructed (including all rights-of-way and other interests in land used in connection with such works) under such contract of October 17, 1945, together with the works constructed under the authority of section 1 of this act, upon repayment of the true cost of such works, including interest, computed as hereinabove set forth; and

(5) that after the effective date of this contract the member agencies of the San Diego County Water Authority, their successors or assigns as the distributors of the water, shall furnish to the Government on a preferential basis and at a rate no higher than that charged other users of comparable quantities of water, a quantity of water sufficient to meet the requirements of Government activities located and to be located in the area served by such agencies.

SEC. 4. For the purpose of enabling him to carry out the provisions of the first section of this act, the Secretary of the Navy is authorized to acquire lands and rights pertaining thereto, or other interests therein, including the temporary use thereof, by donation, purchase, exchange of Government-owned lands, or otherwise.

SEC. 5. The United States and the San Diego County Water Authority and their respective permittees, licensees, and contractees and all users and appropriators of water of the Colorado River diverted or delivered through the existing aqueduct and the enlargement or addition thereto shall observe and be subject to the Colorado River Compact, the Boulder Canyon Project Act, the California Self-Limitation Statute and the Mexican Water Treaty in the diversion, delivery, and use of water of the Colorado River, anything in this act to the contrary notwithstanding, and such condition and covenant shall attach as a matter of law whether or not set out or referred to in the instrument evidencing such permit, license, or contract and shall be deemed to be for the benefit of and be available to the States of Arizona, California, Colorado,

Nevada, New Mexico, Utah, and Wyoming and the users of water therein or thereunder by way of suit, defense, or otherwise in any litigation respecting the waters of the Colorado River.

SEC. 6. The Secretary of the Navy is authorized to provide for the construction of the whole or any part of the work authorized by the first section of this act (1) by contract, (2) by the use of facilities and personnel of the Navy Department, or (3) by the use of the facilities and personnel of any other department or agency of the United States with which an agreement may be entered into to perform or to have performed the whole or any part of such work.

SEC. 7. The appropriation of such sums as may be necessary to carry out the provisions of this act is hereby authorized.

SEC. 8. This act and all works constructed hereunder shall be subject to and controlled by the Colorado River Compact dated November 24, 1922, and proclaimed effective by the President June 25, 1929; the Boulder Canyon Project Act approved December 21, 1928; the California Limitation Act approved by the Governor of California March 4, 1929; and no right or claim of right to the use of the waters of the Colorado River shall be aided or prejudiced hereby.

BUREAU OF RECLAMATION,
Washington 25, D. C., May 21, 1952.

MEMORANDUM.

To: Secretary of the Interior.
From: Commissioner, Bureau of Reclamation.
Subject: Memorandum of Agreement between Department of the Navy and Department of the Interior—Construction of Second Barrel—San Diego Aqueduct.

Public Law 171, Eighty-second Congress, approved October 11, 1951, authorized the Secretary of the Navy to construct a new aqueduct paralleling the existing San Diego aqueduct, and to accomplish all or any part of the work by the use of the facilities and personnel of any other department or agency with which an agreement may be entered into.

Soon after enactment of Public Law 171 the Navy (Bureau of Yards and Docks) inquired as to the willingness of the Bureau of Reclamation to undertake the design and construction of the so-called Second Barrel of the San Diego Aqueduct. Since that time our Regional Director and the District Public Works Officer of the Eleventh Naval District have been drafting a memorandum of agreement to provide for the design and construction by Reclamation, all funds to be advanced by the Navy. Under the terms of the authorizing act the Navy could advance no funds prior to execu-

tion of an agreement between the Navy and the San Diego County Water Authority amending the existing lease agreement covering operation and maintenance of the existing aqueduct. In order to have the work started as soon as possible the Authority, by separate contract with the Bureau executed November 9, 1951, contracted to advance up to \$100,000 to the Bureau for location surveys and designs of the Second Barrel. Field surveys and design work have been proceeding on this basis during the period that negotiations with the Navy have been in progress.

The memorandum of agreement, a copy of which is attached, is now ready for execution. It is satisfactory to the Bureau of Reclamation and we are informed that the Bureau of Yards and Docks is ready to sign on behalf of the Navy. It is most important that the agreement be executed at an early date, in order that advance of funds may be made soon by the Navy. Funds readily available to the San Diego County Water authority which have been advanced during the past 6 months to finance surveys and designs are now nearly used. If the surveys and design work are not to be interrupted, advance from the Navy will be needed soon. The Navy is now in position to make such advance, having executed the required repayment agreement with the San Diego County Water Authority.

The proposed agreement provides that the Bureau's Regional Director will act as the duly authorized representative of the Department, with complete charge of administration of the work on behalf of the Department. The construction will be performed by contract in accordance with our normal procedures and organizational arrangements, with the Chief Engineer acting as contracting officer.

I recommend that the attached memorandum of agreement be approved as to form, for execution by the Commissioner on behalf of the Department of the Interior. Your early attention to this will be appreciated.

(Signed) MICHAEL W. STRAUS,
Commissioner.

Attachment.

Attachment approved as to form: May 26, 1952.

(Signed) OSCAR L. CHAPMAN,
Secretary of the Interior.

[Extract from] Memorandum of Agreement between Department of the Navy and Department of the Interior relating to design and construction of Second Barrel of San Diego Aqueduct.

This memorandum of agreement, made this 28 day of May 1952, in accordance with authority granted by the act of Congress approved 17 June 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, all of which acts are commonly known as the Reclamation Law, and Public Law 171, Eighty-second Congress, approved 11 October 1951 (65 Stat. 404), between the Department of the Navy, acting for this purpose by the Chief of the

Bureau of Yards and Docks, and the Department of the Interior, acting for this purpose by the Commissioner, Bureau of Reclamation;

Whereas the Secretary of the Navy, under the direction of the Secretary of Defense, is authorized and directed by Section 1 of Public Law 171 aforesaid, to provide for

“(1) such enlargement of the existing aqueduct extending from the west end of the San Jacinto tunnel of the Metropolitan Water District of Southern California to the San Vicente Reservoir in San Diego County, Calif., as may be necessary to increase the rated capacity of such existing aqueduct from 85 cubic feet per second to not less than 165 cubic feet per second, or (2) the construction of a new aqueduct paralleling such existing aqueduct and having a rated capacity of not less than 80 cubic feet per second.”

and

Whereas the Secretary of the Navy has determined to effectuate the purpose of said Public Law 171 by the construction of a new aqueduct paralleling the existing San Diego Aqueduct and having a rated capacity of not less than 80 cubic feet per second, which work is hereinafter referred to as the “Second Barrel”; and

Whereas by section 6 of said Public Law 171 aforesaid, the Secretary of the Navy is authorized to provide for the construction of the whole or any part of the work authorized by the first section of the said act “by the use of the facilities and personnel of any other department or agency of the United States with which an agreement may be entered into to perform or have performed the whole or any part of such work”; and

Whereas the Bureau of Reclamation (hereinafter called “Reclamation”) of the Department of the Interior, under authority conferred by the Reclamation law, has made an investigation of the feasibility of the enlargement of the existing aqueduct by means of a Second Barrel and prepared the designs and specifications for the existing aqueduct; and

Whereas the Secretary of the Navy (hereinafter referred to as “Navy”) desires to have Reclamation design and construct the Second Barrel, and Reclamation is willing to undertake said design and construction, under the terms and conditions hereinafter set forth:

Now, therefore, it is agreed by the parties hereto as follows:

1. GENERAL INTENT

Subject to the prior execution of an amendatory contract between the Secretary of the Navy and San Diego County Water Authority, as required by Section 3 of said Public Law 171, Reclamation will, with funds to be advanced by the Navy as hereinafter provided, promptly undertake to design and construct, or cause to be constructed, as expeditiously as possible, a Second Barrel to the existing aqueduct extending from the west end of the San Jacinto Tunnel of the Metropolitan Water District of Southern

California to the San Vicente Reservoir in San Diego County, Calif., which Second Barrel will parallel the existing adqueeduct and have a rated capacity of not less than 80 cubic feet per second, as more particularly hereinafter described. It is the intention of the parties under this agreement to obtain the construction of a Second Barrel which will be fully complete and usable at a total cost not to exceed the funds appropriated therefor under the Military Public Works Appropriation Act of 1952 (65 Stat. 766), and Reclamation will prepare the design and will arrange for the construction toward that end. However, nothing herein shall be construed as a guarantee by Reclamation of completion of the work with the funds available for expenditure hereunder.

2. ADMINISTRATION OF CONTRACT

* * * * *

B. The Regional Director of the Bureau of Reclamation, Boulder City, Nevada, is designated as the duly authorized representative of the Department of the Interior and shall have complete charge of administration of the work under this contract on behalf of the Department of the Interior. As hereinafter used, the term "Reclamation" is understood to include the said Regional Director.

* * * * *

4. ACQUISITION OF LAND

Reclamation will accomplish all surveys and prepare all maps and legal descriptions in the prescribed form necessary for the acquisition of permanent and temporary interests in land required for the Second Barrel. Title evidence and appraisal reports will be procured by Reclamation, subject to approval of the reporting agents. All negotiations for rights-of-way, permanent and temporary interests will be accomplished by Reclamation. In the event it is determined necessary to obtain any or all interests by condemnation, all information required for the filing of the condemnation will be submitted to the District Public Works Officer by Reclamation in final form sufficient for the Navy to approve and file the action. After construction is completed, signed releases from each land owner will be obtained by Reclamation, indicating the satisfaction of the land owner with the restoration of his property. Reclamation will also perform any other real estate work considered necessary in connection with the Second Barrel, as indicated by the District Public Works Officer. Upon receipt by the Navy of completed real estate work, the District Public Works Officer will approve or obtain necessary approvals.

5. CONSTRUCTION

To expedite completion of the work, the design of the Second

Barrel will be so prepared that concurrent contracts may be entered into for construction of portions of the work. Construction will be accomplished by competitive bid lump sum or unit price contracts for each portion of the Second Barrel as designed. Reclamation will take bids, award contracts, and issue change orders as necessary and in conformance with this agreement. All field engineering, inspection of construction, testing of materials, soils analyses, soils testing, and other field tests will be made by Reclamation. When necessary to expedite completion of the project, Reclamation may purchase construction materials for incorporation in the Second Barrel as Government-furnished material. Competitive bidding shall be the basis of all such material procurement whenever practicable.

* * * * *

8. FINANCIAL

A. As promptly as is reasonably practicable after the execution of this agreement, Navy will advance to Reclamation the sum of \$250,000 to apply to the cost of the work. Thereafter, Navy will advance to Reclamation, from time to time, at its request, such additional sums as may be necessary to meet the costs of the work, as hereinafter more fully set forth.

* * * * *

9. MEMORANDUM OF UNDERSTANDING OF 22 APRIL 1946

As soon as practicable after execution by the Navy and the San Diego County Water Authority of the amendatory contract provided for in section 3 of Public Law 171, the Department of the Interior and Navy will enter into an agreement amending the Memorandum of Understanding of 22 April 1946, to provide for the transfer of administration of said amendatory contract and of the Second Barrel, on behalf of the United States, to Reclamation. Such transfer of administration to Reclamation will be effective at such time, and upon such terms, as may be agreed upon between the Department of the Interior and Navy in an amendment of the Memorandum of Understanding of 22 April 1946.

In witness whereof, the parties hereto have caused this Memorandum of Agreement to be executed the day and year first above written.

DEPARTMENT OF THE NAVY,
By (Signed) J. F. JELLEY, *Rear Admiral,*
CEC, USN, Chief of Bureau.

DEPARTMENT OF THE INTERIOR,
By (Signed) H. F. MCPHAIL,
Acting Commissioner.

SAN LUIS VALLEY PROJECT

COLORADO

The San Luis Valley project¹ was found feasible by the Secretary on February 1, 1940, under the provisions of the Reclamation Project Act of 1939. The Platoro Reservoir of the Platoro unit, the first unit of the Conejos division, was reauthorized by a supplemental finding of feasibility of the Secretary on March 7, 1949.

BUREAU OF RECLAMATION,
Washington, January 25, 1940.

The SECRETARY OF THE INTERIOR.

SIR: I am transmitting the report on the San Luis Valley project on the Rio Grande headwaters in Colorado, prepared after consultation with the Corps of Engineers of the War Department, which is also making a similar report. Both reports contemplate construction for joint irrigation and flood-control purposes of the Wagon Wheel Gap Reservoir of 1,000,000 acre-feet on Rio Grande near Creede, and two reservoirs with a combined capacity of 100,000 acre-feet on Conejos River southwest of Alamosa, to provide supplemental water and flood protection for 400,000 acres of irrigated land in Colorado and a lesser benefit to the Rio Grande Valley in New Mexico. The works will assist in the application of the Rio Grande Compact. The Bureau report further adds to the project a small transmountain diversion from the Colorado River Basin to the Rio Grande Basin to assist San Luis Valley in complying with the compact. The Bureau report finds power development unwarranted at this time but provisions for future development are included. A tabulation of data on the project is appended.

Both reports recommend allocating 60 percent of the construction cost of the reservoirs, or \$10,320,000, to irrigation. The Bureau report contemplates repayment of such costs without interest in 40 annual installments of \$258,000. The Chief of Engineers' report proposes a lump-sum payment by the irrigation interests,

¹ Initial funds for construction of the *San Luis Valley Project* were authorized under the provisions of the National Industrial Recovery Act of 1933, but later rescinded.

upon completion of the project of \$5,512,000, which amount, if borrowed by them and retired in 40 years with interest at 3½ percent, would result in equal annual costs to the irrigators. Both reports recommend allocating 40 percent of the construction and of the operation and maintenance costs of the reservoirs to flood control, with such costs to be borne by the Government.

The Chief of Engineers proposes that operation and maintenance of the works be conducted always by the irrigation interests, who are to be reimbursed for the Federal share on account of flood control by a capitalized credit of \$345,000 on the lump-sum irrigation payment. In my opinion the complicated irrigation rights, including the Rio Grande Compact and the potential conflict of irrigation and flood-control operations, make it advisable for the Government to operate and maintain the reservoirs, leaving all other operations in present hands.

Irrigation is the dominant feature of this project. In the circumstances, I believe that this project, if and when undertaken, should be constructed and operated by the Bureau of Reclamation. The project is greatly desired by local interests and would materially improve their economic status. No new lands would be developed. The benefits exceed the annual costs. The project clearly meets all requirements of feasibility and authorization under section 9 of the Reclamation Act of 1939. I recommend that a finding of feasibility, together with the report, be submitted to the President and to the Congress in compliance with that act.

Respectfully,

(Signed) JOHN C. PAGE,
Commissioner.

DEPARTMENT OF THE INTERIOR,
Washington, February 1, 1940.

THE PRESIDENT,
The White House,
(Through the National Resources Planning Board).

MY DEAR MR. PRESIDENT: There is transmitted a letter of January 25, 1940, from the Commissioner of Reclamation, submitting a report on the San Luis Valley project on Rio Grande in Colorado, contemplating an expenditure of \$17,465,000 for the Wagon Wheel Gap Reservoir on Rio Grande, two small reservoirs on Conejos River and a minor transmountain diversion, to provide supplemental water and flood control for 400,000 acres of land already under irrigation. Through consultation and agreement with the Chief of Engineers, representing the Secretary of War, \$6,880,000 of this cost has been allocated to flood control, with no reimbursement contemplated. To irrigation there would be allocated \$10,585,000 to be repaid under the reclamation law in 40 years without interest.

The proposed allocation of costs is proper and equals the estimated cost of the project. The repayment of reimbursable costs can be anticipated with assurance. I find the project desirable, economically and engineeringly feasible, and authorized for construction under the provisions of section 9 of the Reclamation Act of 1939. I therefore recommend its construction thereunder, if and when funds are made available.

Unless you have objections thereto, the letter and report will be transmitted to the Congress, in accordance with the provisions of that law.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE,
Washington, March 30, 1940.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: I return herewith the proposed report of the Bureau of Reclamation on a project for flood control and irrigation in the San Luis Valley, on the Rio Grande, in Colorado, which report you transmitted to me with the statement that you deemed the project desirable, economically and engineeringly feasible, and authorized for construction under the provisions of section 9 of the Reclamation Act of 1939.

I have considered the proposed report of the Bureau of Reclamation in connection with a proposed report on the same project prepared by the Corps of Engineers of the War Department in compliance with the Flood Control Act of June 28, 1938. I find that these two reports are in agreement except as to three questions of policy, namely:

(1) Should the Bureau of Reclamation or the Corps of Engineers construct the project?

(2) Should irrigation beneficiaries repay in 40 annual payments or in a lump-sum payment equivalent to the present value of such payments? (Note: The proposal is to charge Irrigation with 60 percent of the cost of the project, or approximately \$10,320,000.)

(3) Should the Federal Government or the local interests maintain and operate the project after completion?

With respect to these matters, I am of the opinion that, since the project is dominantly an irrigation undertaking, suited to operation and maintenance under the reclamation law, it should be constructed by the Bureau of Reclamation; that the portion of the project cost to be charged to Irrigation should be financed on the basis of the prevailing Federal policy of 40 annual payments by irrigation beneficiaries; and that the project should be maintained

and operated by the Bureau of Reclamation, with water releases to be determined by local responsible interests, and with operation for flood control to be in accordance with regulations prescribed by the Secretary of War.

While it is my desire that legislation initiating the San Luis Valley project, if and when enacted, should be in accord with the views expressed above, you are advised that the enactment of such legislation would not, at this time, be in accord with my program.

It is desired that you arrange to have the report of the Bureau of Reclamation transmitted to Congress on the same day that the report of the Corps of Engineers of the War Department is forwarded, in order that an opportunity may be afforded to have the two reports printed in a single document.

A letter similar to the above has been addressed by me to the Secretary of War.

Sincerely yours,

(Signed) FRANKLIN D. ROOSEVELT,
President.

DEPARTMENT OF THE INTERIOR,
Washington, April 10, 1940.

Hon. WILLIAM B. BANKHEAD,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: I am transmitting herewith the Reclamation report on the San Luis Valley project in Colorado.

In his letter dated January 25, 1940, to me, Commissioner John C. Page, Bureau of Reclamation, said with respect to the project:

The benefits exceed the annual costs. The project clearly meets all requirements of feasibility and authorization under Section 9 of the Reclamation (Project) Act of 1939. I recommend that a finding of feasibility, together with the report, be submitted to the President and to the Congress in compliance with that Act.

My finding of feasibility was included in my letter of February 1, 1940, regarding the project, to the President. This letter stated in part:

The proposed allocation of costs is proper and equals the estimated cost of the project. The repayment of reimbursable costs can be anticipated with assurance. I find the project desirable, economically and engineeringly feasible, and authorized for construction under the provisions of Section 9 of the Reclamation (Project) Act of 1939. I, therefore, recommend its construction thereunder, if and when funds are made available.

The President in his letter to me of March 30, 1940, with reference to a study of the Reclamation report on the San Luis Valley

project and a report prepared by the Corps of Engineers, War Department, on the same project, said in part:

I have considered the proposed report of the Bureau of Reclamation in connection with a proposed report on the same project prepared by the Corps of Engineers of the War Department in compliance with the Flood Control Act of June 28, 1938. I find that these two reports are in agreement except as to three questions of policy, namely:

(1) Should the Bureau of Reclamation or the Corps of Engineers construct the project?

(2) Should irrigation beneficiaries repay in forty annual payments or in a lump-sum payment equivalent to the present value of such payments? (Note: The proposal is to charge Irrigation with 60 percent of the cost of the project, or approximately \$10,320,000.)

(3) Should the Federal Government or the local interests maintain and operate the project after completion?

With respect to these matters, I am of the opinion that since the project is dominantly an irrigation undertaking, suited to operation and maintenance under the Reclamation Law, it should be constructed by the Bureau of Reclamation; that the portion of the project cost to be charged to Irrigation should be financed on the basis of the prevailing Federal policy of forty annual payments by irrigation beneficiaries; and that the project should be maintained and operated by the Bureau of Reclamation, with water releases to be determined by local responsible interests, and with operation for flood control to be in accordance with regulations prescribed by the Secretary of War.

Copies of these three letters are enclosed and are a part of the report, the main body of which, separately bound, also is enclosed. These enclosures constitute the report, the findings, and the authorization contemplated in section 9 of the Reclamation Project Act of 1939, on the San Luis Valley project, Colorado.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

PROVISIONS OF INTERIOR DEPARTMENT APPROPRIATION ACT, 1941

[Extract from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1941, and for other purposes. (Act of June 18, 1940, 54 Stat. 406, 437, 438, Public Law 640, 76th Cong., 3d sess.)

* * * That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, for the Department of the Interior for the fiscal year ending June 30, 1941, namely:

* * * * *

GENERAL FUND, CONSTRUCTION

For continuation of construction of the following projects and for administrative expenses in not to exceed the following

amounts, respectively, to be expended from the general fund of the Treasury in the same manner and for the same objects of expenditures as specified for projects included hereinbefore in this act under the caption "Bureau of Reclamation" under the heading "Administrative provisions and limitations," but without regard to the amounts of the limitations therein set forth, to be immediately available, to remain available until expended, and to be reimbursable (except as to the Pine River project, Colorado, and the Colorado River project, Texas) under the Reclamation law:

* * * * *

San Luis Valley project, Colorado: For further investigations, exploratory and preparatory work, and commencement of construction in accordance with House Document Numbered 693, Seventy-sixth Congress, third session: *Provided*, That commencement of construction of the Closed Basin Drain feature shall be contingent on (a) a conclusive finding of justification for the drain on the basis of cost and the quantity and quality of water to be secured, and (b) adequate arrangements for maintenance of the drain, \$150,000: *Provided further*, That any works to be constructed by virtue of investigations or surveys resulting from this appropriation, shall be so constructed and operated as not to interfere with the operation of or abrogate any of the terms of the Rio Grande Interstate Compact, and any contracts, permits, or licenses relating to such works entered into by the United States shall provide specifically that all rights thereunder shall be subject to and controlled by the provisions of said Rio Grande Interstate Compact. * * *

BUREAU OF RECLAMATION,
Washington, D.C., March 3, 1949.

The SECRETARY OF THE INTERIOR.

SIR: The San Luis Valley Project in Colorado, including the Conejos Division of that project, was authorized for construction on April 10, 1940, by the Secretary of the Interior on a finding of feasibility made in accordance with provisions of the Reclamation Project Act of 1939. The finding of feasibility, together with related documents, was transmitted to the Congress and printed as House Document No. 693, 76th Congress. The Supplemental Report printed in House Document No. 693 recommended that "Prior to construction of the Conejos unit, further investigations should be made to ascertain the desirability of substituting a single main-stream reservoir on its lower reaches for the two reservoirs as better regulation will result." The necessary addi-

tional investigations were made, and on September 29, 1947, the conclusions drawn from those investigations were reported to you. On October 3, 1947, you approved the construction of the Platoro Reservoir, one of the two reservoirs planned, as the first stage of development in the San Luis Valley Project.

The original authorization for the project provided for the water users to repay 60 percent of the cost and for 40 percent of the cost to be allocated to flood control. The construction cost of this first unit is now estimated at \$4,200,000. Of this amount, 60 percent, or \$2,520,000 is properly allocable to irrigation and should be reimbursable. The water users in the Conejos Water Conservancy District have indicated their willingness to repay the allocation to irrigation, and negotiations for a repayment contract are well along. The remaining part of the cost, \$1,680,000, is properly allocable to flood control, and is non-reimbursable in accordance with the terms of the Reclamation Project Act of 1939. The average flood damages which would be prevented by the Platoro Reservoir are estimated by the Corps of Engineers, Department of the Army as \$57,900 annually. The present worth of the evaluated flood damages prevented, computed as an annuity over a 50 year period at a 3% interest rate, in accordance with the standard practice of the Corps of Engineers, would justify an allocation to flood control of \$1,490,000. In view of the unusually long life of this reservoir, estimated to be in excess of 100 years, an allocation of \$1,680,000 is justifiable.

Consultation with the Chief of Engineers and with the Secretary of the Army in regard to the flood control allocation, as prescribed in Section 9 (b) of the Reclamation Project Act of 1939, indicates that the Department of the Army would not object to the allocation. A copy of a letter to this effect from the Acting Secretary of the Army is attached.

In view of the foregoing, I recommend:

A. That by your approval hereof you make the following supplemental findings with respect to the Conejos Division of the San Luis Valley Project, to wit:

(1) That the part of the estimated cost thereof which can properly be allocated to irrigation and probably be repaid by the water users is \$2,520,000;

(2) That the part of the estimated cost thereof which can properly be allocated to flood control is \$1,680,000; and

B. That you transmit such supplemental findings to the President and the Congress.

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved March 7, 1949.

(Signed) J. A. KRUG,
Secretary of the Interior.

UNITED STATES DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., March 7, 1949.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: The San Luis Valley Project, including the Conejos Division, was authorized for construction on April 10, 1940 by a finding of feasibility by the Secretary of the Interior in accordance with the provisions of the Reclamation Project Act of 1939. This letter constitutes my supplemental finding of feasibility for the Platoro Reservoir as the first unit of the Conejos Division of the San Luis Valley Project, necessitated by the increase in the estimated cost of construction since the original authorization. A copy of a letter from the Commissioner of Reclamation containing information on which these findings are based is attached.

I find that the proposed Platoro Reservoir has engineering feasibility; that the estimated cost of construction of the Platoro Reservoir is \$4,200,000; that \$2,520,000 can properly be allocated to irrigation and can probably be repaid by the water users; and, after consultation with the Secretary of the Army, that \$1,680,000 can properly be allocated to flood control. The total of the foregoing allocations equals the total estimated cost of construction. Consequently, I find, pursuant to the provisions of Section 9 (a) of the Reclamation Project Act of 1939, that the Platoro Reservoir is authorized for construction.

Unless you have objection, these findings will be transmitted to the Congress in accordance with the provisions of the Reclamation Project Act of 1939.

Sincerely yours,

(Signed) J. A. KRUG,
Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington 25, D. C., March 21, 1949.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This will acknowledge receipt of your letter dated March 7, 1949, addressed to the President, and advising that you have made a supplemental finding of feasibility for the Platoro Reservoir as the first unit of the Conejos Division

of the San Luis Valley Project, Colorado. You state that this supplemental finding of feasibility was necessitated by the increase in the estimated cost of construction since the original authorization. A copy of a letter dated March 3, 1949, from the Commissioner of Reclamation, containing information on which these findings are based was enclosed, together with a letter dated February 14, 1949, from the Acting Secretary of the Army, commenting on the proposed allocation of cost to flood control.

It is noted that the current estimated cost of construction of the proposed Platoro Reservoir is \$4,200,000; that \$2,520,000 has been allocated to irrigation; and that \$1,680,000 has been allocated to flood control, after consultation with the Secretary of the Army. It is further noted that in his letter dated February 14, 1949, the Acting Secretary of the Army states that the Department of the Army would not object to this allocation to flood control.

In accordance with the authority delegated to the Director of the Bureau of the Budget in the letter dated July 2, 1946, from the President, the Director has authorized me to advise you that there would be no objection to the submission of the report to the Congress.

Sincerely yours,

(Signed) W. McCANDLESS,
Assistant Director, Estimates.

OFFICE OF THE SECRETARY,
Washington 25, D. C., March 31, 1949.

Hon. ALBEN W. BARKLEY,
President of the Senate.

MY DEAR MR. VICE-PRESIDENT: In accordance with the provisions of Section 9 of the Reclamation Project Act of 1939, I submit herewith my supplemental finding of feasibility for the Platoro Reservoir as the first unit of the Conejos Division of the San Luis Valley Reclamation Project, Colorado.

My findings are contained in the attached letter, dated March 7, 1949, addressed to the President and incorporated herein by reference.

The Assistant Director, Bureau of the Budget, has advised that there would be no objection to the submission of these findings to the Congress. A copy of his letter is attached.

Sincerely yours,

(Signed) OSCAR L. CHAPMAN,
Acting Secretary of the Interior.

OFFICE OF THE SECRETARY,
Washington 25, D. C., March 31, 1949.

Hon. SAM RAYBURN,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: In accordance with the provisions of Section 9 of the Reclamation Project Act of 1939, I submit herewith my supplemental finding of feasibility for the Platoro Reservoir as the first unit of the Conejos Division of the San Luis Valley Reclamation Project, Colorado.

My findings are contained in the attached letter, dated March 7, 1949, addressed to the President and incorporated herein by reference.

The Assistant Director, Bureau of the Budget, has advised that there would be no objection to the submission of these findings to the Congress. A copy of his letter is attached.

Sincerely yours,

(Signed) OSCAR L. CHAPMAN,
Acting Secretary of the Interior.

SANPETE PROJECT

UTAH

The Sanpete project¹ was found feasible by the Secretary on November 1, 1935, and approved by the President on November 6, 1935, pursuant to section 4 of the act of June 25, 1910 (36 Stat. 836), and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702).

OFFICE OF THE SECRETARY,
Washington, November 1, 1935.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The Supreme Court of the United States in the Parker Dam decision (*United States v. State of Arizona*) indicated that Section 4 of the Act of June 25, 1910 (295 U. S., 174) is applicable to irrigation projects constructed under the National Industrial Recovery Act, and this report upon the Sanpete project, Utah, is made to you under said statute of 1910 and under Subsection B of Section 4 of the Act of December 5, 1924 (43 Stat., 701).

Section 4 of the Act of June 25, 1910, provides, in effect, that after the date of that act no irrigation project to be constructed under the Act of June 17, 1902 (32 Stat., 388), and acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924 (43 Stat., 701), provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

¹ The *Sanpete Project* was initiated under the provisions of the National Industrial Recovery Act of 1933.

Under dates of November 29, 1933, and May 22, 1935, I approved allotments of \$300,000.00 and \$75,000.00 respectively for the construction of the Sanpete project, which consists of the Ephraim Division and the Spring City Division, all of which is still available or has been expended toward the construction of both divisions. The water to be developed by the two divisions will be used for the irrigation of privately owned lands already under irrigation in the vicinity of Ephraim, Utah, in the case of the Ephraim Division and near Spring City, Utah, in the case of the Spring City Division.

The lands of the Ephraim Division are under the Ephraim Irrigation Company system, with which company a contract was entered into under date of July 11, 1934, by the United States covering the repayment of the construction cost of this division and construction work is now in progress thereon. The lands of the Spring City Division are under the irrigation system of the Horseshoe Irrigation Company with which a contract was entered into on May 31, 1935, by the United States for the repayment of the construction cost of this division. Construction work, however, has not yet started on the main feature of the Spring City Division, namely, the Spring City Tunnel, as the undertaking of this construction is contingent upon there being sufficient funds left after constructing the Ephraim Division.

The lands of both divisions were put under irrigation during the early settlement of Utah but due to an inadequate water supply water shortages are experienced on these lands every year. It is therefore the purpose of the project to furnish an additional water supply for these private lands in order that water shortages may be reduced as far as possible.

The furnishing of an additional water supply for the land of the Ephraim Division will be accomplished by the construction of the Ephraim Tunnel, 7200 feet in length, and of two short feeder canals by which surplus waters will be diverted from the Colorado River watershed through a mountain divide to the lands of the division, which are in the Great Salt Lake Basin. The capacity of the Ephraim Tunnel and feeder canals is about 100 second feet.

The furnishing of an additional water supply for the lands of the Spring City Division will also be accomplished by a tunnel 5000 feet in length and by two short feeder canals by which surplus water will also be diverted from the Colorado River watershed through the same mountain divide to the lands of the Spring City Division, which are also in the Great Salt Lake Basin. The capacity of the Spring City tunnel and the two feeder canals is about 90 second feet.

Both divisions of the project are old established communities located near an extensive sheep and cattle range but the carrying on of the sheep and cattle industry requires the raising of feed as the cattle and sheep have to be fed during the winter months and the bringing in of an additional water supply which is so badly needed (and which is the purpose of the project) will create

a better balance between range and farm lands and thereby make for a more permanent and successful agriculture.

Studies and investigations made by the Bureau of Reclamation indicate that while it is not possible to divert a large amount of water from the Colorado River watershed to the project lands a sufficient supply is available for diversion to warrant the construction of the two tunnels and the feeder canals, that the construction of these works is feasible from an engineering standpoint, that the Ephraim Division can be completed within the allotment but that the construction of the Spring City Division is dependent upon the amount of funds left from the total allotment of \$375,000.00 after the Ephraim Division has been constructed.

I find that the project is feasible, that the land watered thereby is adaptable for actual settlement and farm homes, that the lands are badly in need of an additional water supply, that the continued existence of the communities depends upon the furnishing of an additional water supply as contemplated by the project, that the land prices in these old settled Mormon communities are not likely to be inflated as a result of development herein recommended, and that the project will probably return its cost to the United States.

I recommend that the project consisting of the Ephraim Division (consisting of the Ephraim Tunnel and two feeder canals) and the Spring City Division (consisting of the Spring City Tunnel and two feeder canals), the Ephraim Division of which is already under construction, be approved, that any steps or action heretofore taken toward the construction of the same be ratified, and that authority be issued to this Department to proceed with the work and to make contracts and take any necessary action to construct and complete the Ephraim Division of the Sanpete project, and also to construct and complete the Spring City Division as funds become available therefor.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved November 6, 1935.

(Signed) FRANKLIN D. ROOSEVELT,
President.

SANTA MARGARITA PROJECT

CALIFORNIA

Congress authorized the Santa Margarita Project on July 28, 1954 (68 Stat. 575, Public Law 547, 83d Cong., 2d sess.).

An act to authorize the Secretary of the Interior to construct facilities to provide water for irrigation, municipal, domestic, military, and other uses from the Santa Margarita River, California, and for other purposes. (Act of July 28, 1954, 68 Stat. 575, Public Law 547, 83d Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Interior, acting pursuant to the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388), and Acts amendatory thereof or supplementary thereto, as far as those laws are not inconsistent with the provisions of this Act, is authorized to construct, operate, and maintain such dam and other facilities as may be required to make available for irrigation, municipal, domestic, military, and other uses the yield of the reservoir created by De Luz Dam to be located immediately below the confluence of De Luz Creek with Santa Margarita River on Camp Joseph H. Pendleton, San Diego County, California, for the Fallbrook Public Utility District and such other users as herein provided. The authority of the Secretary to construct said facilities is contingent upon a determination by him that—

(a) the Fallbrook Public Utility District shall have entered into a contract under subsection (d), section 9, of the Reclamation Project Act of 1939 undertaking to repay to the United States of America appropriate portions, as determined by the Secretary, of the actual costs of constructing, operating, and maintaining such dam and other facilities, together with interest as hereinafter provided; and under no circumstances shall the Department of the Navy be subject to any charges or costs except on the basis of its proportional use, if any, of such dam and other facilities, as determined pursuant to section 2 (b) of this Act;

(b) the officer or agency of the State of California authorized by law to grant permits for the appropriation of water shall have granted such permits to the United States of America and shall have granted permits to the Fallbrook Public Utility District for rights to the use of water for storage and diversion as provided in this Act; including, as to the Fallbrook Public Utility District,

approval of all requisite changes in points of diversion and storage, and purposes and places of use;

(c) the Fallbrook Public Utility District shall have agreed that it will not assert against the United States of America any prior appropriative right it may have to water in excess of that quantity deliverable to it under the provisions of this Act, and will share in the use of the waters impounded by the De Luz Dam on the basis of equal priority and in accordance with the ratio prescribed in section 3 (a) of this Act; this agreement and waiver and the changes in points of diversion and storage, required by the preceding paragraph, shall become effective and binding only when the dam and other facilities herein provided for shall have been completed and put into operation: *Provided, however*, That the enactment of this legislation does not constitute a recognition of, or an admission that, the Fallbrook Public Utility District has any rights to the use of water in the Santa Margarita River, which rights, if any, exist only by virtue of the laws of the State of California; and

(d) the De Luz Dam and other facilities herein authorized have economic and engineering feasibility.

SEC. 2. (a) In the interest of comity between the United States of America and the State of California and consistent with the historic policy of the United States of America of Federal non-interference with State water law, the Secretary of the Navy shall promptly comply with the procedures for the acquisition of appropriative water rights required under the laws of the State of California as soon as he is satisfied, with the advice of the Attorney General of the United States, that such action will not adversely affect the rights of the United States of America under the laws of the State of California.

(b) The Department of the Navy will not be subject to any charges or costs in connection with the De Luz Dam or its facilities, except upon completion and then shall be charged in reasonable proportion to its use of the facilities under regulations agreed upon by the Secretary of the Navy and Secretary of the Interior.

SEC. 3. (a) The operation of the dam and other facilities herein provided shall be by the Secretary of the Interior, under regulations satisfactory to the Secretary of the Navy with respect to the Navy's share of the impounded water and national security. In that operation, 60 per centum of the water impounded by De Luz Dam is hereby allotted to the Secretary of the Navy; 40 per centum of the water impounded by De Luz Dam is hereby allotted to the Fallbrook Public Utility District. The Department of the Navy and the Fallbrook Public Utility District will participate in the water impounded by De Luz Dam on the basis of equal priority and in accordance with the ratio prescribed in the preceding sentence: *Provided, however*, That at any time the Secretary of the Navy certifies that he does not have immediate need for any portion of the aforesaid 60 per centum of the water, the official agreed upon to administer the dam and facilities is empowered to enter into temporary contracts for the delivery of water subject, however, to the first right of the Secretary of the Navy to

demand that water without charge and without obligation on the part of the United States of America upon thirty days' notice as set forth in any such contract with the approval of the Secretary of the Navy: *Provided, further*, That all moneys paid in to the United States of America under any such contract shall be covered into the general fund of the Treasury, and shall not be applied against the indebtedness of the Fallbrook Public Utility District to the United States of America. In making any such temporary contracts for water not immediately needed by the Navy, the first right thereto, if otherwise consistent with the laws of the State of California, shall be given the Fallbrook Public Utility District.

(b) The general repayment obligation of the Fallbrook Public Utility District (which shall include interest on the unamortized balance of construction costs of the project allocated to municipal and domestic waters at a rate equal to the average rate, which rate shall be certified by the Secretary of the Treasury, on the long-term loans of the United States outstanding on the date of this Act) to be undertaken pursuant to section 1 of this Act shall be spread in annual installments, which need not be equal, over a period of not more than fifty-six years, exclusive of a development period, or as near thereto as is consistent with the operation of a formula, mutually agreeable to the parties, under which the payments are varied in the light of factors pertinent to the irrigators' ability to pay. The development period shall begin in the year in which water for use by the district is first available, as announced by the Secretary, and shall end in the year in which the conservation storage space in De Luz Reservoir first fills but shall, in no event, exceed seventeen years. During the development period water shall be delivered to the district under annual water rental notices at rates fixed by the Secretary and payable in advance, and any moneys collected in excess of operation and maintenance costs shall be credited to repayment of the capital costs chargeable to the district and the repayment period fixed herein shall be reduced proportionately. The Secretary may transfer to the district the care, operation, and maintenance of the facilities constructed by him under conditions satisfactory to him and to the district and, with respect to such of the facilities as are located within the boundaries of Camp Pendleton, satisfactory also to the Secretary of the Navy.

(c) For the purposes of this Act the basis, measure, and limit of all rights of the United States of America pertaining to the use of water shall be the laws of the State of California: *Provided*, That nothing in this Act shall be construed as a grant or a relinquishment by the United States of America of any of its rights to the use of water which it acquired according to the laws of the State of California either as a result of its acquisition of the lands comprising Camp Joseph H. Pendleton and adjoining naval installations, and the right to the use of water as a part of said acquisition, or through actual use or prescription or both since the date of that acquisition, if any, or to create any legal obligation to store any water in De Luz Reservoir, to the use of which it has

such rights, or to require the division under this Act of water to which it has such rights.

(d) Unless otherwise agreed by the Secretary of the Navy, De Luz Dam as herein provided shall at all times be operated in a manner which will permit the free passage of all of the water to the use of which the United States of America is entitled according to the laws of the State of California either as a result of its acquisition of the lands comprising Camp Joseph H. Pendleton and adjoining naval installations, and the rights to the use of water as a part of said acquisitions, or through actual use or prescription or both since the date of that acquisition, if any, and will not be administered or operated in any way which will impair or deplete the quantities of water to the use of which the United States of America would be entitled under the laws of the State of California had that structure not been built.

SEC. 4. After the construction of the De Luz Dam, the official operating the reservoir shall deliver water to the Fallbrook Public Utility District, pursuant to regulations issued by the Secretary of the Interior, as follows:

(1) One thousand eight hundred acre feet in any year until the reservoir attains an active content of sixty-three thousand acre-feet;

(2) Not in excess of four thousand eight hundred acre-feet in any year after the reservoir attains an active content of sixty-three thousand acre-feet and until said reservoir attains an active content of ninety-eight thousand acre-feet; and

(3) Not in excess of eight thousand acre-feet in any year after the reservoir attains an active content of ninety-eight thousand acre-feet and until the conservation storage space of the reservoir has been filled.

SEC. 5. The Secretary of the Army through the Chief of Engineers, acting in accordance with section 7 of the Flood Control Act of 1944 (58 Stat. 887) is authorized to utilize for purposes of flood control such portion of the capacity of De Luz Reservoir as may be available therefor.

SEC. 6. There are hereby authorized to be appropriated, out of any money in the Treasury of the United States not otherwise appropriated, \$22,636,000, the current estimated construction cost of the Santa Margarita River project, plus or minus such amounts as may be indicated by the engineering cost indices for this type of construction, and, in addition thereto, such sums as may be required to operate and maintain the said project.

SEC. 7. From time to time the Attorney General, the Secretary of the Interior, and the Secretary of the Navy shall report to the Congress concerning the conditions specified in section 1 of this Act, and the first report thereon shall be submitted to the Congress no later than one year from the date of enactment of this Act.

SANTA MARIA PROJECT

CALIFORNIA

Santa Maria Project was authorized by Act of Congress September 3, 1954 (68 Stat. 1190, Public Law 774, 83d Cong., 2d sess.).

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D. C., January 16, 1953.

The SECRETARY OF THE INTERIOR.

SIR: On August 29, 1952, Acting Secretary of the Interior Wolfsohn approved and adopted the Bureau of Reclamation's proposed report of August 12, 1952, on the Santa Maria project, Southern Pacific Basin, Calif., as the proposed report of the Department of the Interior and authorized copies to be transmitted, in behalf of the Secretary, to the State of California and to the Secretary of the Army for their views and recommendations in accordance with the provisions of section 1 (c) of the Flood Control Act of 1944 (58 Stat. 887), to the State of California for the report and recommendations of the head of the agency exercising administration over the wildlife resources of that State in accordance with the provisions of the act of August 14, 1946 (60 Stat. 1080), and to interested Federal agencies for their views and comments. This action having been taken, I now submit this report which is based on and includes the proposed report, for your consideration.

In response to the above transmittals, comments have been received from the State of California, the Department of Commerce, the Federal Power Commission, and the Public Health Service. Copies of these comments, all of which are favorable or raise no objection to the proposed construction, are attached. If other comments are received, they will be forwarded to you.

The comments of the State of California are, in general, quite favorable to the plan of development presented in the report. The State concludes, among other things, that (1) the water-supply situation in the Santa Maria Basin is critical, and steps should be

taken immediately to relieve the water shortage in that area; (2) the city of Santa Maria and developments in the flood plain should be protected adequately from damage from future floods; and (3) the proposed development would provide urgently needed supplemental water, and would improve flood protection. The State recommends authorization and construction of the project as set forth in the report.

Other recommendations of the State relate to including certain provisions in the contracts between the United States and local interests relating to repayment and acquisition of project works and to giving consideration to the advantages of repaying reimbursable costs of the project to the Federal Government in a lump sum. These are matters which may appropriately be given further study in cooperation with State and local interests, but they are, in my opinion, matters of general policy which should be considered in general legislation rather than as applicable to a particular project. They concern broad policies of repayment and do not affect the proposed construction.

The Department of Commerce comments only that the project is needed and that it appears to be economically sound. The Federal Power Commission raises no objection to the proposed development and agrees with our conclusion that the inclusion of power as a project purpose is not feasible. The Federal Security Agency comments that there appears to be no conflict with its water-pollution abatement, water supply, and vector-control programs.

In my proposed report, the cost estimates were on the basis of October 1950 price levels. The works proposed for construction by the Department of the Interior are now estimated to cost \$16,982,000 at current price levels of which \$13,969,000 is allocated to water conservation and would be repaid by the beneficiaries, and \$3,013,000 is allocated to flood control and is nonreimbursable.

Local beneficiaries would be obligated to pay the \$13,969,000 allocated to water conservation, plus the operation, maintenance, and replacement expenses for the project including those for the works to be operated by the Federal Government. Although the details relating to the repayment contract have not been worked out, local interests have indicated their willingness to assume this repayment obligation, it is expected that repayment contract negotiations would be consummated prior to start of construction.

After consideration of all the comments received, modifications of the Department's proposed report are considered necessary only with respect to the cost estimates and the economic analyses as herein provided. Accordingly, I recommend that you approve and adopt this report on the Santa Maria project, Southern Pacific Basin, Calif., and that you transmit it together with copies of the comments to the President and subsequently to the Congress in accordance with the provisions of the Reclamation Project Act of 1939.

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., January 16, 1953.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: Attached for your consideration is my report on the Santa Maria project, Southern Pacific Basin, Calif. This report is sent to you pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

The report presents a plan for water conservation and flood control for the Santa Maria River Basin, Calif. The plan is the result of coordinated studies by the Bureau of Reclamation and the Corps of Engineers, and it is proposed that each agency construct certain of the features in the dual-purpose plan.

The report recommends authorization and construction of a 214,000 acre-foot reservoir on the Cuyama River and levee and channel improvements in the Santa Maria Valley. The Bureau of Reclamation would construct, operate, and maintain the reservoir. The Corps of Engineers would construct the related levee and channel improvements, and these would be operated and maintained by local interests.

The proposed report of the Department of the Interior on this development was transmitted to the State of California and to the Secretary of the Army for their views and recommendations in accordance with the provisions of section 1 of the Flood Control Act of December 22, 1944, to the State of California for the report and recommendations of the head of the agency exercising administration over wildlife resources of that State in accordance with provisions of the act of August 14, 1946, and to the agencies represented on the Federal Inter-Agency River Basin Committee for their information and comments. Copies of comments which have been received from the State of California, the Department of Commerce, the Federal Power Commission, and the Public Health Service are attached. The 90-day period provided by law for submittal of comments expired about the middle of December. If other comments are received, they will be forwarded to you.

I shall appreciate receiving advice concerning the relationship of the Santa Maria project to your program before the report is transmitted to the Congress.

Sincerely yours,

(Signed) OSCAR L. CHAPMAN,
Secretary of the Interior.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., April 25, 1953.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: On January 16, 1953, my predecessor in office submitted his report on the Santa Maria project, California, which presents a plan for water conservation and flood control for the Santa Maria River Basin. By letter of January 27, 1953, Budget Director Dodge called my attention to this report, among others, and asked that it be reviewed to determine whether it conforms to the present program of the Department of the Interior, and whether any modifications or revisions should be made.

In submitting the report, Secretary Chapman pointed out that the 90-day period provided for review of the report by the affected State and Federal agencies had expired about the middle of December, and that any further comments received would be forwarded for your consideration. At that time comments had been received from the State of California, the Department of Commerce, the Federal Power Commission, and the Public Health Service.

By letter dated January 29, 1953, Maj. Gen. S. D. Sturgis, Jr., Acting Chief of Engineers, transmitted the comments of the Department of the Army. General Sturgis pointed out that this Department's plan for the multiple-purpose Vaquero Reservoir was the result of coordinated studies made by field offices of the Bureau of Reclamation and the Corps of Engineers, and that the corps' soon-to-be-completed report on levee and channel improvements was compatible with the proposals of the Department of the Interior. Accordingly, General Sturgis concurred in the recommendations of this Department. A copy of his letter is enclosed.

By letter of February 17, 1953, Under Secretary True D. Morse transmitted the comments of the Department of Agriculture, and recommended that submittal of the Interior Department's report be deferred until the Department of the Interior, the Corps of Engineers, the Department of Agriculture, and the State of California can agree upon unified multiple-purpose plans for the Santa Maria Basin. Upon review of the previous planning work which has been carried out in the Santa Maria Basin by the three Federal agencies, I find that any program for watershed improvement which might be worked out jointly by the several agencies would not alter the need for the major water-conservation and flood-control works proposed by this Department and the Corps of Engineers. For this reason, and in accordance with agreements reached by our staff members on April 17, it is our plan that this Department's report go forward with a recommendation for congressional authorization.

We realize full well the value that such a program would have in reduction of sedimentation in the reservoir and in reduction of damages from floods of low magnitude in certain areas. The two Departments have agreed that analyses be made to determine the relation of such a program to the conservation and flood-control reservoir works which we propose, and to evaluate their relative effects. Similarly, we have agreed that such analyses should not delay authorization of these works. They can readily be done as a part of the definite plan studies of the preconstruction work. Accordingly, we are designating representatives for this purpose.

It will be noted from the comments previously submitted that the State of California is in favor of the recommended plan of development, and concludes, among other things, that (1) the water-supply situation in the Santa Maria Basin is critical, and steps should be taken immediately to relieve the water shortage in that area; (2) the city of Santa Maria and developments in the flood plain should be protected adequately from damage from future floods; and (3) the proposed development would provide urgently needed supplemental water, and would improve flood protection. The State recommends authorization and construction of the project as set forth in the report.

The State also recommends that certain provisions relating to repayment and acquisition of project works and to giving consideration to the advantages of repaying reimbursable costs of the project to the Federal Government in a lump sum be included in the contracts between the United States and local interests. These matters will be given further study in cooperation with State and local interests, but they are matters of general policy which should be considered by the Congress in general legislation rather than as applicable to a particular project. Since these matters concern broad policies of repayment and do not affect the proposed construction, I do not propose any changes in the report in this respect.

Former Secretary Chapman's report included revised cost estimates and cost allocations, but did not furnish data supporting these revised costs or information with respect to revised economic studies. A statement on revised benefits and costs is enclosed. The works proposed for construction by the Department of the Interior are now estimated to cost \$16,982,000, of which \$13,969,000 is allocated to water conservation and would be repaid by the beneficiaries and \$3,013,000 is allocated to flood control and is non-reimbursable. The direct benefits alone from the proposed construction, by the Bureau of Reclamation and the Corps of Engineers, would compare with costs in a ratio of 1.87 to 1.00 on the basis of a 50-year period of analysis. If indirect benefits were included, and if the analysis were extended to 100 years, which is less than the economic life of the project, instead of being confined to 50 years, the benefit-cost ratio would be considerably larger.

After review of the Santa Maria project and the previous report thereon, I find that the project has engineering and economic feasibility, that no modification of the proposed plan of development

is necessary, and that it conforms to the present program of the Department of the Interior. The report is revised only to include the additional information furnished herewith. As thus revised, the report is approved and adopted as my report on the Santa Maria project. It is sent to you pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939.

I shall appreciate receiving advice concerning the relationship of this project to your program so that I may transmit the report to the Congress in accordance with the provisions of the Reclamation Project Act of 1939.

Sincerely yours,

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington 25, D. C., July 9, 1953.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: Receipt is acknowledged of your letter of April 25, 1953, submitting your report on the Santa Maria project, California.

It is our understanding that the purpose of the Santa Maria project is to provide flood control and water for irrigation through the recharge of ground water. Your staff has advised us that the scope of reclamation law is adequate to include construction work for such a purpose.

The principal works for construction by the Department of the Interior are the Vaquero Dam and Reservoir, now estimated to cost \$16,982,000, of which \$13,969,000 is allocated to water conservation and would be repaid by the beneficiaries and \$3,013,000 is allocated to flood control and is nonreimbursable. The detailed report indicates that on the basis of a repayment period of 50 years the direct benefits from the proposed construction would exceed the costs.

In a letter of February 17, 1953, Under Secretary True D. Morse transmitted the comments of the Department of Agriculture and recommended that submittal of the Department of the Interior's report be deferred until the Department of the Interior, Corps of Engineers, the Department of Agriculture, and the State of California can agree upon unified multiple-purpose plans for the Santa Maria Basin. With respect to the recommendation by the Department of Agriculture you state that any program for watershed improvement which might be worked out jointly by the several agencies would not alter the need for the major water conservation and flood-control works proposed. On June 26, 1953, Under Secretary Morse designated his representative to cooperate

with the Department of the Interior in a study of the relationship of the Agriculture Department's watershed improvement program to the proposed Santa Maria project. He agreed, however, that this study should not delay moving the Department of the Interior's report on the project forward for authorization.

It is noted that the State of California recommends that consideration be given to the advantages of repaying the reimbursable cost of the conservation features to the Federal Government in a lump sum.

There would be no objection to the submission of your proposed project report to the Congress. In view of the difficulties which may be encountered in securing repayment for the cost of replenishment of ground water, a firm contract should be obtained for repayment in a lump sum or over a period of 50 years of the costs allocated to water conservation before construction is initiated.

It is requested that a copy of this letter accompany the transmittal of your report.

Sincerely yours,

(Signed) ROWLAND HUGHES,
Assistant Director.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., July 20, 1953.

Hon. JOSEPH W. MARTIN,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: My report on the Santa Maria project, California, is transmitted herewith pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

The report presents a plan for water conservation and flood control for the Santa Maria River Basin in Southern California. The plan has been developed jointly by the Bureau of Reclamation of this Department and the Corps of Engineers, Department of the Army. The report contains a recommendation for authorization of construction by the Bureau of Reclamation of the 214,000 acre-foot capacity Vaquero Reservoir on the Cayuma River, a tributary of the Santa Maria River, and for related flood-control levees and channel improvements in the Santa Maria Valley which would be constructed by the Corps of Engineers.

Copies of the proposed report of the Department of the Interior on this development were transmitted to the State of California and to the Secretary of the Army for their views and recommendations in accordance with the provisions of section 1 of the Flood Control Act of December 22, 1944, to the State of California for the report and recommendations of the head of the agency exer-

cising administration over wildlife resources of that State in accordance with provisions of the act of August 14, 1946, and to the agencies represented on the Federal Interagency River Basin Committee for their information and comments. Copies of all the comments which have been received are enclosed with the report.

The report and copies of all the comments were transmitted to the President, and the Bureau of the Budget has advised that there would be no objection to the submittal of the report to the Congress. A copy of Assistant Budget Director Rowland Hughes' letter of July 9, 1953, is enclosed.

I recommend that the project be authorized.

Sincerely yours,

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

An act to authorize the Secretary of the Interior to construct the Santa Maria project, Southern Pacific Basin, California. (Act of September 3, 1954, 68 Stat. 1190, Public Law 774, 83d Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Interior is hereby authorized to construct the project for irrigation and the conservation of water, flood control, and for other purposes, on Santa Maria River, California, pursuant to the laws of California relating to water and water rights, and, otherwise substantially in accordance with recommendations of the Secretary of the Interior dated January 16, 1953, entitled "Santa Maria project, Southern Pacific Basin, California", in relation to the Vaquero Dam and Reservoir and any other conservation feature of the project: *Provided*, That in view of the special circumstances of the Santa Maria project, neither the provisions of the third sentence of section 46 of the Act of May 25, 1926 (44 Stat. 636, 649) nor any other similar provision of the Federal reclamation laws shall be applicable thereto so long as the water utilized on project lands is acquired by pumping from the underground reservoir: *Provided further*, That a repayment contract not exceeding a period of fifty years be executed prior to commencement of construction of the works herein authorized.

SEC. 2. There are hereby authorized to be appropriated, out of any moneys in the Treasury not otherwise appropriated, such sums as may be required for the purposes of this Act not to exceed \$16,982,000.

SCOFIELD PROJECT

UTAH

The Scofield project was found feasible by the Secretary on June 11, 1943, and approved by the President on June 24, 1943, under the terms of the Water Conservation and Utilization Act of August 11, 1939, as amended.

OFFICE OF THE SECRETARY,
Washington, June 11, 1943.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: An investigation has been made of the Scofield project involving the replacement of the existing Scofield Dam on Fish Creek in Carbon County, Utah, and pursuant to the authority of the Act of August 11, 1939 (53 Stat. 1418), as amended, I submit this report on the proposed project and request your approval of the findings, recommendations, and certifications contained herein.

PROJECT PURPOSES

It is proposed to replace the existing deteriorated Scofield Dam in order to avert a total collapse of that structure. Failure of the dam would eliminate storage which is vital for the irrigation of 12,500 acres of land in the Price River Valley. In addition to stabilizing the water supply for the irrigated lands, the new reservoir would form the basis for providing supplemental water to the Gooseberry project when that project is authorized. The Gooseberry project has been investigated by the Bureau of Reclamation, and a recommendation will be made for its construction, probably after the war. It is expected that opportunities for permanent settlement in addition to rehabilitation of existing families will be offered to farm families in both areas.

The greatest immediate importance is the fact that if the weak-

ened dam fails, the waters released would damage severely the towns, highways, coal mines, and railroad, telegraph, and telephone systems which lie in the narrow confines of the Price River Canyon. It is feared that the outlet works and spillway, because of their deteriorated condition, may become blocked during a period of heavy inflow. In that case waters which would flow naturally down the valley causing some damage, would be retarded and impounded, before the dam fails, to such an extent that the magnitude of the flood below the dam after failure would be many times that of the flood entering the reservoir. Any disruption of the services of these mines, railroads, and communication systems at the present time would be serious and of national concern as all are playing vital roles in the prosecution of the war. The Chief of Engineers, United States Army, has considered the flood damage aspects and his views are expressed in the attached letter from the Secretary of War.

THE PLAN

The new Scofield Dam, which is proposed for construction just below the existing unsafe structure, would, in addition to alleviating a critical condition, provide about 73,000 acre feet of storage. Of this capacity, 65,000 acre feet would be available for irrigation needs and 8,000 acre feet would be dead storage for the propagation and maintenance of fish life. By storing flood waters in this reservoir and through exchange agreements, part of the surplus flow of Price River could be retained in a proposed upstream reservoir to provide a supplementary supply for approximately 30,000 acres of land in the Gooseberry project.

Changes in these general plans may be found necessary, but it is expected that any changes would be of a minor nature and would neither alter the general objectives of the project, nor result in material departures from the present findings, predicated on the present plan of the project.

PARTICIPATION OF FEDERAL AGENCIES

It is proposed that the Bureau of Reclamation construct the new dam. Subject to change, the present plan is that the Bureau also would operate and maintain Scofield Dam and Reservoir with funds supplied by or through a conservancy district which has been organized to assume the repayment obligation to the United States. The Bureau would negotiate the necessary contracts for repayment of reimbursable funds spent in the construction of the reservoir.

The Department of Agriculture, through the War Food Administrator, has transmitted a letter which is attached, indicating approval of the project. From this letter it will be noted that the major participation by the Department of Agriculture would be to rehabilitate the present distribution system of the Price River Valley lands, and to acquire and develop new lands which may be brought under irrigation as a replacement for waterlogged and submarginal areas now being used.

Before the war, assistance was provided on similar projects by the Work Projects Administration and the Civilian Conservation Corps through the contribution of labor, and small amounts of material, supplies, and equipment. Since such assistance is no longer available, the present plan is to use Government forces, supplemented by any type of public labor which may be available, such as that furnished by the Selective Service System.

PARTICIPATION BY NONFEDERAL AGENCIES

The Commissioner of the Utah Fish and Game Department has expressed a desire to use the proposed reservoir for wildlife and recreational purposes, and has indicated that his Department would contribute \$31,000 toward construction of the Scofield Dam.

The Price River interests have indicated that they would repay the "reimbursable construction costs" expended in the new dam and reservoir, exclusive of the portion to be repaid by the Utah Fish and Game Department, through a conservancy district which has been organized. The water users benefited by the work to be undertaken by the Department of Agriculture would be required to assume the repayment of reimbursable money expended in that work in accordance with section 5 of the Act of October 14, 1940.

It is planned to accept any other aid or financial assistance which may be offered by the local interests.

ESTIMATED COST AND FINANCING PROCEDURE

It is estimated that the Bureau of Reclamation would require \$720,000 to build Scofield Dam of which \$393,000 would be allocated to flood control. Benefited interests are expected to repay \$247,000 and an additional \$80,000 would probably be credited to the project upon completion, through equipment transfer and salvage values. Alien, Civilian Public Service, or similar labor would be used if available. Expenses amounting to an estimated \$326,000 incurred by the Department of Agriculture would be defrayed by the repayment of \$197,000 by project interests, by an estimated salvage and equipment transfer value of \$18,000, and by contributions amounting to \$111,000 in the form of alien, Civilian Public Service, or similar labor, and whatever materials and equipment were furnished by the Government for the use of such labor camps. Tabulations showing the breakdown of the estimated costs and financing procedure are given at the end of this letter.

The obligation of the Price River interests for construction of the dam would vary, depending upon the extent of development of the proposed Gooseberry irrigation project and its participation in the benefits of the Scofield project. The following tabulation shows a plan which has been indicated to be acceptable to all concerned:

	<i>With Gooseberry interests participating</i>	<i>Without Gooseberry interests participating</i>
Gooseberry interests	\$116,000	None
Price River interests.....	100,000	\$216,000
Utah Fish and Game Department.....	31,000	31,000
Total	247,000	247,000

SIZE OF FARM UNITS

The determination of the size of farm units, required by the governing statute, cannot be made until studies of the matter are completed. I plan to make the determination and settle the matter satisfactorily prior to commencing any major construction work.

FINDINGS, CERTIFICATIONS, AND RECOMMENDATIONS

Based upon the report covering the engineering and economic aspects of the work proposed to be accomplished by the Bureau of Reclamation, I find and certify that:

- (1) The proposed project has engineering feasibility.
- (2) The total estimated cost is \$640,000.
- (3) The estimated cost which properly can be allocated to irrigation is \$216,000.
- (4) The water users and related interests, through the existing conservancy district (without or with Gooseberry participation), probably could repay \$216,000 of the costs allocated to irrigation in accordance with the requirements of section 4 of the Act of October 14, 1940.
- (5) The estimated cost allocated to wildlife (miscellaneous water supply) is \$31,000, which would be returned to the United States through the contribution by the Utah Fish and Game Department.
- (6) No part of the estimated costs properly could be allocated to the irrigation of Indian trust and tribal lands.
- (7) The estimated cost which properly could be allocated to flood control is \$393,000.

Many factors, such as the precarious condition of the existing dam, the inadequacy of a temporary spillway recently constructed, the great value of railroad, mining, highway, and agricultural property which would be destroyed, and the loss of life which might occur if sudden rains or melting snows should cause a sudden heavy inflow to the present reservoir, lead me to urge strongly the immediate replacement of the Scofield Dam. However, it may be that equipment, materials, supplies, and labor needed for this work are of such extreme importance to our own armed forces and those of the United Nations, if this war is to be expeditiously concluded, that it may be undesirable to commence construction until conditions change.

Consequently, it is planned, if you approve of this project, to settle as soon as possible those matters relating to land acquisitions, water rights, and the repayment contract. In the meantime the project is being submitted to the War Production Board for its approval of the procurement and incorporation of the materials that would be needed for the construction.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE.

Approved June 24, 1943.

(Signed) FRANKLIN D. ROOSEVELT,
President.

THE WHITE HOUSE,
Washington, June 24, 1943.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This will acknowledge receipt of your letter of June 11, 1943, together with supporting data addressed to me through the Bureau of the Budget requesting authorization for the construction of a new dam to replace the existing Scofield Dam in Carbon County, Utah, under the terms of the Water Conservation and Utilization Act of August 11, 1939, as amended, at a total cost of \$640,000.

Due to the apparent urgency as stated by you, the Secretary of War, and the War Food Administrator, I herewith approve the construction of this project under the terms and conditions recommended.

In keeping with your suggestion I have also addressed a letter to Mr. Donald M. Nelson, Chairman of the War Production Board, requesting his cooperation relating to preference ratings for the necessary materials and supplies in order to expedite construction during the short working season of this location.

Sincerely yours,

(Signed) FRANKLIN D. ROOSEVELT,
President.

SHOSHONE PROJECT

WYOMING-MONTANA

The Shoshone project, originally called Cody project, was authorized by the Secretary under the Reclamation Act of 1902 (32 Stat. 388) on February 10, 1904; examined and reported upon by a Board of Army Engineers pursuant to the act of June 25, 1910 (36 Stat. 835), and approved by the President January 5, 1911.

Heart Mountain power development was found feasible by the Secretary on June 19, 1945, under the provisions of section 9 of the Reclamation Project Act of 1939 (53 Stat. 1193).

The Shoshone extensions were authorized as part of the Missouri River Basin project under the provisions of the Flood Control Acts of 1944 and 1946.

UNITED STATES GEOLOGICAL SURVEY,
RECLAMATION SERVICE,
Washington, February 1, 1904.

TO THE CHIEF ENGINEER: The undersigned have examined the maps and estimates on the irrigation project in the vicinity of Cody, Wyoming, and find that it is feasible to store water and construct canals for about 90,000 acres of land, and furnish the same with an ample supply of water at a cost not greater than the price at which the land would be readily taken by settlers. Many details are still to be investigated, and many modifications in the present project will probably be found advisable, but we are of the opinion that the project is feasible, and recommend it for early construction.

(Signed) A. P. DAVIS,
J. H. QUINTON,
L. H. TAYLOR,
J. B. LIPPINCOTT,
Board of Engineers.

UNITED STATES GEOLOGICAL SURVEY,
Washington, February 5, 1904.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: On January 26, 1903, the Board of Land Commissioners of the State of Wyoming offered to turn over to the Reclamation Service the lands segregated under the Carey Act and known as the "Cody and Salisbury Tract." In accordance with this and subsequent correspondence, surveys were made during 1903 and estimates prepared during the following winter, showing that approximately 90,000 acres of land can be irrigated on the north side of Shoshone River, in Bighorn County, Wyoming, by the construction of a dam in Shoshone River, and a canal heading in the canyon above the town of Cody.

The preliminary estimates, prepared by Mr. Jeremiah Ahern, have been submitted to a board of consulting engineers consisting of Messrs. Arthur P. Davis, J. H. Quinton, L. H. Taylor, and J. B. Lippincott. The report of this committee is as follows:

The undersigned have examined the maps and estimates on the irrigation project in the vicinity of Cody, Wyoming, and find that it is feasible to store water and construct canals for about 90,000 acres of land, and furnish the same with an ample supply of water at a cost not greater than the price at which the land would be readily taken by settlers. Many details are still to be investigated, and many modifications in the present project will probably be found advisable, but we are of the opinion that the project is feasible, and recommend it for early construction.

Additional details of structures are to be worked out during the remainder of the winter, and during the early spring the project will be examined on the ground by consulting engineers, to determine upon additional facts preliminary to drawing up the plans, specifications, and form of advertisement. It is, however, desirable to take some definite action in the matter, as the people of Wyoming have expressed a desire to learn definitely whether this work can probably be taken up under the reclamation law.

The questions as to title to this tract of land and the attached water rights have, as suggested by the late Governor De Forest Richards, been held in abeyance, pending consideration of the project. It now appears that the present Governor has some doubts in regard to the legal situation, and before proceeding further it will be necessary to obtain definite transference of rights to land and water. In order to facilitate prompt action, I respectfully make the following recommendations:

RECOMMENDATION

That you give general approval to the construction of the Cody

Project, under the Reclamation Fund, provided that satisfactory rights to land and water can be secured, and provided that further consideration of details on the ground, by consulting engineers, results in favorable reports.

That the sum of \$2,250,000, or so much thereof as may be necessary, be tentatively set aside for use in construction, subject to the conditions above noted.

That authority be granted to the Chief Engineer of the Reclamation Service to negotiate with the Board of Land Commissioners of the State of Wyoming for the full transference of necessary rights.

That upon satisfactory and complete transference, a further report be received by you, to be based upon the considerations on the ground of some of the alternatives not yet determined upon.

In short, what is now desired, is a formal expression of willingness to proceed with the project, and one upon which to base definite negotiations with the State authorities of Wyoming.

Very respectfully,

(Signed) CHAS. D. WALCOTT,
Director.

Approved.

(Signed) E. A. HITCHCOCK,
Secretary.

OFFICE OF THE SECRETARY,
Washington, February 10, 1904.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: In a letter of the 5th instant to the Department you reported in the matter of the proposed Cody Project, Wyoming, under the Reclamation act of June 17, 1902—32 Stat., 388.

You stated therein that the Board of Land Commissioners of the State of Wyoming have offered to turn over to the Reclamation Service the lands segregated under the "Carey" act and known as the "Cody and Salisbury tract," and that as the result of investigations and surveys it appears that, approximately 90,000 acres of land can be irrigated on the north side of Shoshone River in Bighorn County, Wyoming, by the construction of a dam in Shoshone River, and a canal heading in the canyon above the town of Cody.

It appears from the facts you have related that the project is a feasible one and that the cost of storing water and constructing canals for the lands proposed to be irrigated and furnishing an ample supply of water will not be greater than the price at which the lands can be readily sold to settlers.

You have accordingly recommended as follows:

First: That I give general approval to the construction of the

Cody Project, under the Reclamation Fund, provided that satisfactory rights to land and water can be secured, and provided that further consideration of details on the ground, by consulting engineers, results in favorable reports.

Second: That the sum of \$2,250,000, or so much thereof as may be necessary be tentatively set aside for use in construction, subject to the conditions above stated.

Third: That authority be granted to the Chief Engineer of the Reclamation Service to negotiate with the Board of Land Commissioners of the State of Wyoming for the full transference of necessary rights.

Fourth: That upon satisfactory and complete transference, a further report be received by me, to be based on the considerations on the ground of some of the alternatives not yet determined on.

On consideration of the subject matter of your letter, of your recommendations above set forth, and of your stated desire for a formal expression of willingness to proceed with the project, your recommendations are all approved and the sum of \$2,250,000, or so much thereof as may be necessary, is hereby set aside from the fund provided by the act mentioned, tentatively, for use in construction under the conditions specified and you are hereby authorized to take such further action as may be essential to carry the recommendations into effect.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

HEART MOUNTAIN POWER ¹

BUREAU OF RECLAMATION,
Washington, March 28, 1945.

The SECRETARY OF THE INTERIOR.

SIR: A critical electric power shortage exists throughout Wyoming, and particularly in northern Wyoming. This area, which produces food for the prosecution of the war, is also an oil-producing center of increasing importance. The Bureau of Reclamation's hydroelectric plants are the principal suppliers of electric power and energy for the entire area. Generating facilities in the area are at present inadequate to meet fully the

¹ *Heart Mountain Division* was initiated under the provisions of the Emergency Relief Act of 1935.

power demand. With continued expansion of oil-drilling activities, the demand on the Bureau of Reclamation's plants for power will increase. The power situation in the area became acute when in November of last year there was a substantial reduction in power output of the Shoshone power plant caused by a rock slide in the Shoshone Reservoir. Although steps have been taken to clear away debris from the Shoshone power plant intake works, a similar slide can occur at any time.

In view of the foregoing, it is highly important to the economic life of the northern Wyoming area that additional sources of power be developed at the earliest possible moment. The development of power at the Heart Mountain site on the Shoshone Federal reclamation project is the most rapid means of furnishing an additional power supply for the area.

The Heart Mountain power development, as described in the attached report, consists of a 5,000-kilowatt hydroelectric plant making use of power water which would be available from the Shoshone Canyon conduit. It would utilize a head of approximately 265 feet. The construction of this plant, at a cost of \$900,000, would add 5,000 kilowatts capacity to the system at a point where it is most needed. The revenue from the sale of the additional amount of energy, as shown on the financial study of the report, would pay the annual expenses, amortize the power investment over 16 years of operation, and, in addition, pay a fair share of the cost of the conduit as a rental charge for its use in conveying the water supply to the power plant. In view of the fact that the conduit was constructed as an irrigation feature of the Heart Mountain and Oregon Basin divisions of the Shoshone project, and that its entire capacity, except for a small winter flow, will be required for irrigation purposes when the Oregon Basin division is ultimately developed and power will not be able to rely firmly on its use thereafter, no allocation of any part of the cost of the conduit can equitably be made to power. The rental charge fixed is based on the proportionate use of capacity for power. During the period before the Oregon Basin is developed for irrigation (estimated to be at least 15 years following the end of the war), the rental charge will be \$6,933 annually, based upon the use of 260 cubic feet per second of capacity throughout the year. Thereafter, as the Oregon Basin is developed, the use will drop to 200 cubic feet per second, which use will occur principally during the non-irrigation season, resulting in a rental charge of \$3,555 annually. If, as is estimated, the Oregon Basin is not developed for 15 years after the war, the Heart Mountain power development will have paid \$230,969 rental for use of the Shoshone Canyon conduit at the end of 50 years' operation of the power plant. This will be a material contribution toward repayment of its entire construction cost of approximately \$1,600,000.

The Heart Mountain power plant would thus, as an added power feature of the Shoshone project, add 5,000 kilowatts of peaking or reserve capacity to the power system at a most favorable point, help relieve a critical power situation at the earliest possible time, and financially contribute to the cost of the Shoshone Canyon

conduit. In addition, it would advance development in a region which is now handicapped by lack of power and provide some assistance in future development. It would not retard nor change the development of other projects, as these will be needed as soon as irrigation development schedules require such projects.

The benefits to be derived from the construction of the Heart Mountain power development considerably exceed the annual costs, and the proposed project clearly meets all the requirements of the Reclamation Act of 1939. I recommend, therefore, that you find the project feasible, that you adopt this report as your proposed report on the Heart Mountain power development, and that you authorize me, in your behalf, to transmit copies of this letter and of the attached proposed report to the affected States and to the Secretary of War in accordance with the procedure contemplated by section 1 of the Flood Control Act (Public 534, 78th Cong., 2d sess.). Upon clearance with the affected States and with the Secretary of War, copies of the report, together with the comments, if any, of the affected States and of the Secretary of War, will be submitted for your transmittal to the President and, subsequently, to the Congress.

Respectfully,

(Signed) H. W. BASHORE,
Commissioner.

Approved April 9, 1945.

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

BUREAU OF RECLAMATION,
Washington, June 9, 1945.

The SECRETARY OF THE INTERIOR.

SIR: On April 9, you approved my letter to you of March 28, copy attached, transmitting for your approval as your proposed report, a report on the Heart Mountain power development, Shoshone Federal reclamation project, Wyoming, and recommending that you find construction of the proposed development feasible, pursuant to section 9 (a) of the Reclamation Project Act of 1939.

By your approval, you also authorized me, in your behalf, to transmit your proposed report to the Governor of Wyoming and to the Secretary of War with a request to each for their written views and recommendations, pursuant to section 1 of the Flood Control Act of 1944. The written views and recommendations of the Governor of Wyoming and of the Secretary of War have now been received and are favorable to the development. Copies of their replies are attached. Pursuant to the procedure of the Federal Inter-Agency River Basin Committee, I have also obtained the written views of the other constituent agencies represented

thereon. The comments of these other agencies also are favorable to the proposed development, and copies of their comments are attached.

Accordingly, it is recommended that you adopt the proposed report as your report on the Heart Mountain power development, pursuant to the Reclamation Project Act of 1939. It is further recommended that you transmit this report to the President, and subsequently to the Congress, together with the findings you are required to make pursuant to section 9 (a) of that act, and the comments referred to above.

Respectfully,

(Signed) H. W. BASHORE,
Commissioner.

OFFICE OF THE SECRETARY,
Washington, June 19, 1945.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: There is enclosed a letter to me, dated June 9, 1945, from the Commissioner of the Bureau of Reclamation, submitting to me a report on the Heart Mountain power development, Shoshone Federal reclamation project, Wyoming. I have approved and adopted that report and transmit it to you, pursuant to section 9 (a) of the Reclamation Project Act of 1939.

The proposed plan contemplates construction of the Heart Mountain power plant at a site adjacent to the Shoshone River in northern Wyoming, about 3 miles below the existing Shoshone Dam. The power plant, which would constitute a new supplemental work on the existing Shoshone project, would have a capacity of 5,000 kilowatts and utilize a head of approximately 265 feet.

The enclosed report demonstrates in detail that revenues from the sale of power produced at the proposed plant would be sufficient to pay the annual expenses of operation and maintenance, and to amortize the entire cost of construction of the plant, \$900,000, at the end of 16 years of operation. The entire construction cost is allocated to power, inasmuch as the proposed plant would not be used for irrigation purposes. Hence, no part of the estimated construction cost is allocated to irrigation, or to municipal water supply or other miscellaneous purposes. The report also shows that construction of the plant would add 5,000 kilowatts of capacity to the Bureau of Reclamation's power system at a point where, and at a time when, it is most urgently needed. Construction would be completed within a year from the time funds become available.

I find that the proposed plant is feasible from an engineering standpoint, that it will be economically beneficial, and that repayment of all costs can be anticipated with assurance. It is consequently authorized for construction under the provisions of section 9 (a) of the Reclamation Project Act of 1939, and I recommend that its construction be started as soon as funds are made available therefor.

In accordance with the procedure contemplated by section 1 of the Flood Control Act of 1944, the enclosed report has been transmitted to the Governor of Wyoming and to the Secretary of War, and their written views have been obtained. In accordance with the procedure of the Federal Inter-Agency River Basin Committee, the written views of the Chief of Engineers of the United States Army, the Federal Power Commission, and the Department of Agriculture have also been obtained. Copies of these written views are attached to the letter from the Commissioner of Reclamation.

Construction of the proposed plant is urgently needed in view of the critical electric-power shortage which now exists throughout Wyoming and particularly in northern Wyoming. This area is an oil-producing center of considerable and increasing importance and also produces food, both of which are important in the prosecution of the war. The principal suppliers of electric energy in the area are the Bureau of Reclamation's hydroelectric plants. Generating facilities in the area are inadequate to meet fully the power demand, even though as much power as possible is being brought in from adjacent territory. Rapid expansion of oil-drilling activities will increase the demands on the already inadequate power supply. A rock slide at the Shoshone Reservoir in November of 1944 caused a reduction in the power output at the Shoshone power plant of the Bureau of Reclamation and thus made the power-supply situation even more acute. Although steps have been taken to clear debris away from the intake works of this power plant, a similar slide can occur at any time.

Unless you have an objection, the report and the other documents enclosed will be transmitted to the Congress in accordance with the provisions of the Reclamation Project Act of 1939.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

THE WHITE HOUSE,
Washington, July 24, 1945.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: I have received your letter of June 19, 1945, transmitting the report of the Bureau of Reclamation

on the Heart Mountain power development, Shoshone Federal reclamation project, Wyoming. In your letter, you find that the project is feasible from both an economic and an engineering standpoint, and that it is consequently authorized for construction under the provisions of section 9 (a) of the Reclamation Project Act of 1939.

As you know, construction of Federal public works during the war has been restricted to projects needed for the war program or necessary to maintain essential civilian services. Accordingly, you may submit this report to the Congress with the understanding that approval of any estimate of appropriation for early construction will be based upon an adequate show of need either for the war program or for maintenance of essential civilian services.

Sincerely yours,

(Signed) HARRY S. TRUMAN,
President.

OFFICE OF THE SECRETARY,
Washington, August 31, 1945.

Hon. SAM RAYBURN,
Speaker of the House.

MY DEAR MR. SPEAKER: In accordance with the requirements of section 9 of the Reclamation Project Act of 1939, I submit herewith my report on the Heart Mountain power development, Shoshone Federal reclamation project, in Wyoming. The report contains the necessary allocations of costs and findings that the development is feasible from an engineering standpoint and that the estimated costs will probably be returned to the United States.

Pursuant to the procedures contemplated in section 1 of the Flood Control Act of 1944 (58 Stat. 887), the report has been transmitted to the Secretary of War and to the Governor of Wyoming, affording them an opportunity to submit their written views and recommendations with regard to the project. On June 4, 1945, the Secretary of War replied that the proposed Heart Mountain power development is consistent with the comprehensive plan of development of the water resources of the Missouri River Basin adopted by the Congress in the Flood Control Act approved December 22, 1944. The Governor of Wyoming, on May 4, 1945, advised that he approved this development in full without reservations of any nature. Copies of these two letters are attached.

The requirements of section 9 (a) of the Reclamation Project Act of 1939 and of section 1 of the Flood Control Act of 1944 having been met, the Heart Mountain power development is authorized for construction in accordance with the Federal reclamation laws.

On June 19, I submitted my report on this development to the President. A copy of the President's reply of July 24 is attached.

Copies of the report have been reviewed by the other member agencies of the Federal Inter-Agency River Basin Committee. By letter of May 3, 1945, the Federal Power Commission, by letter of May 16, 1945, the Department of Agriculture, and by letter of May 30, 1945, the Corps of Engineers concurred in the proposed development. Copies of the letters from these three agencies are attached.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

PROVISIONS OF FIRST DEFICIENCY APPROPRIATION ACT, 1946

[Extracts from] An act making appropriations to supply deficiencies in certain appropriations for the fiscal year ending June 30, 1946, and for prior fiscal years, to provide supplemental appropriations for the fiscal year ending June 30, 1946, and for other purposes. (Act of December 28, 1945, 59 Stat. 632, 647, Public Law 269, 79th Cong., 1st sess.)

* * * That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, to supply deficiencies in certain appropriations for the fiscal year ending June 30, 1946, and for prior fiscal years, to provide supplemental appropriations for the fiscal year ending June 30, 1946, and for other purposes, namely:

* * * * *

RECLAMATION FUND, SPECIAL FUND

Construction: For additional amounts for salaries and expenses (other than project offices), construction of the following projects, and general investigations, including the objects specified under the head "Bureau of Reclamation" in the Interior Department Appropriation Act, 1946, to be expended from the Reclamation Fund, to remain available until expended and to be reimbursable under the Reclamation law:

* * * * *

Shoshone project, Wyoming: Heart Mountain division, \$1,000,000; Power division, \$1,124,000.

* * * * *

SOLANO PROJECT

CALIFORNIA

The Solano project, originally called Solano County project, was found feasible and authorized by the Secretary on November 11, 1948, under the provisions of section 9 of the Reclamation Project Act of 1939 (53 Stat. 1193).

UNITED STATES DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D. C., April 26, 1948.

THE SECRETARY OF THE INTERIOR.

SIR: Transmitted herewith is my report on the Solano County Project, California, which is proposed as a part of the Department of the Interior's comprehensive plan for the development of the water resources of Central Valley Basin.

The Solano County project, as outlined in the attached¹ Director's report, dated March 15, 1948, is needed urgently to provide a dependable water supply for important national defense establishments in Solano County and to provide irrigation, municipal, and industrial water, without which the rapidly growing economy of the County can not be sustained. Flood control, recreation, and fish and wildlife improvements are also included in its multiple purpose functions.

The most critical immediate need is for municipal water to meet the demands of the Cities of Vallejo, Benicia, Fairfield and Suisun which serve and support military establishments. All of these cities with the exception of Vallejo are now experiencing water shortages and have exhausted the local water resources. Vallejo has a barely adequate water supply only because of water imported across Carquinez Straits under a war emergency contract with East Bay Municipal Utility District. This contract expires in 1952 and the Utility District has advised the City that the contract will not be renewed because of increasing demands in its own service area along the east shore of San Francisco Bay.

¹ Excluded from this publication.

Municipal and industrial requirements within the growing cities create within themselves an immediate need for additional water. The crucial problem, however, is the present deficiency in firm water supply for the Mare Island Navy Yard which receives its water from the City of Vallejo, Benicia Arsenal which is served by the City of Benicia, and the Army's Air Transport Command Base near Fairfield which obtains a meager water supply from inadequate and failing local groundwater resources. All three of these military bases are permanent establishments of great importance.

The need for water to protect existing irrigation development in Solano County and to make possible the expansion of the County's agricultural economy is of less than paramount importance only in comparison with the emergency condition facing the urban areas and military establishments. Local irrigation supplies have been exploited beyond their safe yield in some localities and nowhere are the present supplies adequate to meet the demand for increased agricultural production brought about by increasing population within the County and the adjoining San Francisco Bay area.

Putah Creek, a local tributary of the Sacramento River that is now wasting practically all of its 375,000 acre-feet of average annual runoff into the ocean, is the most logical and economical source of water supply for the combined needs of Solano County.

The Solano County Project, as outlined in the Regional Director's report of March 15, 1948, provides for a large storage reservoir at the Monticello site on Putah Creek, a small diversion dam two miles downstream, a 42 mile main canal, and the necessary wasteways, laterals, and drainage works. The Regional Director recommends that the capacity of Monticello Reservoir be 2,200,000 acre-feet. A reservoir of this size would produce a firm annual yield of 285,000 acre-feet, eliminate practically all of the present flood damage along the lower reaches of Putah Creek and create valuable new recreation benefits. Some improvement to fish and wildlife would also be obtained.

The yield from the reservoir would provide a dependable municipal, military, and industrial water supply equal to about three times the immediate requirements. It would make available a water supply for about 119,000 acres of land, including 7,000 acres of presently irrigated land now served from inadequate groundwater supplies and 112,000 acres of new lands. Of these, 5,000 acres and 88,125 acres respectively would be served in any one year.

In general, I concur in the findings of the Regional Director and approve his report, except for the two following modifications:

(1) In reference to the capacity of the Monticello Reservoir, the State of California has maintained that the capacity of the Monticello Reservoir should be held to approximately 1,600,000 acre-feet. A reservoir of this lower capacity would provide a firm water yield about 10 percent less than that from the larger 2,200,000 acre-feet structure. The flood control function and the service to municipal and industrial water users would remain unchanged while the acreage of new lands that could be irrigated

would be reduced about 11 percent. Although the smaller project would result in a slightly lower ratio of benefits to costs and would not permit the same degree of development as the larger reservoir, it would have the advantage of slightly lower annual costs to the irrigation water users, and slightly greater assurance of a firm water supply. In view of the relatively minor differences involved in reducing the proposed reservoir capacity, and because of the advantage of having unanimous agreement between Federal, State and local interests, I recommend that the Monticello Reservoir be constructed to a capacity of 1,600,000 acre-feet, and that the related irrigation facilities be constructed to correspondingly smaller proportions. Such a project would serve a total of 105,800 acres of which 5,000 acres of lands presently irrigated and 77,560 acres of new lands, would receive water in any one year as presented in the Substantiating Materials to the Regional Director's report.

(2) With respect to the costs allocated to domestic and industrial water supply, I recommend that no interest be charged on unpaid balances due on these items, and that in lieu thereof, these water users continue their payments beyond the period required to retire the costs allocated to domestic and industrial water supply, and that those payments be applied to repayment of irrigation costs. The total payments by the domestic and industrial water users would be identical with what they would pay if the interest procedure were applied, and the revenues to the United States would be the same. The domestic and industrial water users, from the start, have agreed to purchase water at a rate, and over a period of years, sufficient to render assistance to the irrigation water users. It is appropriate, therefore, for this procedure to be used, for, among other things, it will result in the same period of payment by the domestic and industrial water users as will apply for the irrigation water users.

The plan has engineering feasibility. The overall cost of the project is estimated at \$45,577,000. Of this, \$11,900,000 is for the irrigation distribution system which, if constructed by the Bureau of Reclamation, will be fully reimbursable within forty years under a separate contract as provided by Section 9 (d) of the Reclamation Project Act of 1939. The remaining \$33,667,000 is for reservoirs, main canals, and related facilities, the tentative allocation for which is as follows: \$26,699,000 to irrigation, \$5,048,000 to municipal and industrial water supply, and \$1,930,000 (nonreimbursable) to flood control. Based upon the indicated desires of the water users irrigation payments will be accomplished under contracts as provided for by Section 9 (e) of the Reclamation Project Act. Payments for municipal and industrial water would be covered by contracts under Section 9 (c).

It is estimated that all reimbursable costs (other than for the distribution system which would be repaid in 40 years) would be returned to the Government in 50 years with the irrigators paying \$3.80 per acre-foot for water and the domestic and industrial water users paying \$10.00 per acre-foot for untreated water delivered at terminal reservoirs or other points in the

project canal system. The revenues from the sale of water at \$10.00 per acre-foot for domestic and industrial purposes would pay off the \$5,048,000 allocated to those uses in 29 years. The domestic and industrial users, however, would continue their payments for the full 50 years and the amount which they would pay between the 29th and 50th year (about \$6,500,000) would be applied to payment of irrigation costs. The distribution system, if constructed by the Bureau of Reclamation could be repaid in 40 years with an annual charge of \$7.25 per acre, including operation and maintenance costs during that period.

The following tabulation summarizes the tentative allocations and estimated payments:

<i>Reservoirs, Main Canals and Related Facilities:</i>		<i>Payment</i>
(1) Allocated to irrigation.....	\$26,699,000	
Allocated to irrigation and paid by revenue from sale of domestic and industrial water supplies	6,500,000	
To be paid by irrigation water users.....	20,199,000	\$20,199,000
(2) Allocated to domestic and industrial water supplies	5,048,000	
Allocated to irrigation and paid by revenues from sale of domestic and industrial water supplies	6,500,000	
To be paid by domestic and industrial water users	11,548,000	11,548,000
(3) Allocated to flood control ¹	1,930,000	1,930,000
<i>Distribution System:</i>		
(1) Allocated to irrigation and to be repaid by irrigation water users.....	11,900,000	11,900,000
Estimate of total project cost.....		45,577,000

¹ Non-reimbursable.

Annual payments, including payment on capital investment plus operation and maintenance would approximate the following:

	<i>Operation and maintenance</i>	<i>Total</i>
<i>Irrigation Water Users (per average acre):</i>		
For Water (50 years); \$3.80 per acre-foot total (including approximately \$1.30 for O&M) with average annual requirement of 2.7 acre-foot at canal side.....	\$3.50	\$10.25
For distribution system (40 Years).....	3.65	7.25
Estimated totals	7.15	17.50
<i>Domestic and Industrial Water Users: Per acre-foot at terminal reservoirs or other points in the project canal system, but not including treatment of water, or facilities to regulate water supplies thus received, or to convey them from the project facilities to the points of use.....</i>		
		10.00

I recognize the necessity for taking into account the possibility of increased costs which may or may not eventuate. Any increase or decrease in costs will, if necessary, be reflected in extensions

or reductions, as the case may be, of the period during which construction costs are returned by collections from irrigation, domestic and industrial, and other water users. If experience should indicate costs exceeding the estimates contained in this report, the water rates to be paid by the water users should remain the same as herein proposed until the actual cost is repaid. The costs of the irrigation distribution systems, of course, would be repaid within the 40 year period required by law.

A bill, H. R. 5927, to authorize the Solano County Project substantially in accordance with the plan as presented in the Regional Director's report on March 15, 1948, but providing 1,600,000 acre-feet as the capacity of the proposed Monticello Reservoir, has been introduced in the Congress. Hearings on the bill were held by the Subcommittee on Irrigation and Reclamation of the House Public Lands Committee on April 12 and 13. At these hearings, testimony was presented for the State of California favoring the project, and including the following statement in a letter to Subcommittee Chairman Rockwell signed by Governor Earl Warren.

For the foregoing reasons, and because I believe that the construction of the project as proposed would yield the greatest benefits to the greatest number of people, and because the Bureau of Reclamation favors the Monticello reservoir site as opposed to the other sites on Putah Creek, I favor the construction of the project as outlined in H. R. 5927, and respectfully request favorable action on the bill by your Committee.

The proposed plan has been reviewed by field officials of the Corps of Engineers, Department of the Army, and in his report to Chairman Welch of the House Public Lands Committee on H. R. 5927, the Secretary of the Army included the following statement:

I am pleased to advise you, therefore, that I am able to accept the submission of the report of the Regional Director to the District Engineer in this case as compliance with the procedure set forth in the Flood Control Act of 1944; and that this Department has no objection to enactment of H. R. 5927.

Inserted also in the testimony in support of the plan, was a letter to you from the Honorable W. John Kenney, Acting Secretary of the Navy, dated March 12, 1947, requesting that you urge the Congress to approve the Solano Project and authorize its construction as essential to the national defense.

I recommend that you approve and adopt this report as your proposed report on the Solano County Project, and that you authorize me, in your behalf, to take the necessary steps to comply with Section 1 of the Flood Control Act of 1944 (58 Stat. 887), and with the provisions of the Act of August 14, 1946 (60 Stat. 1080).

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved and adopted May 5, 1948.

(Signed) J. A. KRUG,
Secretary of the Interior.

BUREAU OF RECLAMATION,
Washington 25, D. C., November 10, 1948.

THE SECRETARY OF THE INTERIOR.

SIR: On May 5, 1948, you adopted my report on the Solano County Project, California, as your proposed report, and authorized me to take the necessary steps to comply with the provisions of Section 1 of the Flood Control Act of 1944 (58 Stat. 887), and with the provisions of the Act of August 14, 1946 (60 Stat. 1080).

In your behalf, copies of the report were transmitted to the Secretary of the Army and to the State of California for comments as required by the above mentioned statutes. In addition, copies of the report were transmitted to the Department of Agriculture, the Department of Commerce, and the Federal Power Commission for their comments. Copies of the report and of all the comments received are attached.

These comments, particularly those of the State of California and the Department of the Army, reveal agreement that there is urgent need for supplemental water supplies for the cities of Fairfield, Suisun, Benecia, and Vallejo, and for the key military installations of the Fairfield-Suisun Army Air Base, Benecia Arsenal, and the Mare Island Navy Yard. There is agreement, too, that construction of the Solano County Project is the best method of meeting these needs. The need for water to protect existing irrigation development in Solano County, to broaden the base for the County's rapidly expanding economy, and to extend economic opportunity to its growing population is only slightly less urgent.

In view of the comments received, and because of the desirability of seeking early authorization of the project, I recommend that you adopt the proposed report which you approved on May 5, 1948, as your report; that you find the Solano County Project to be feasible in accordance with the provisions of Section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187); and that you transmit it, together with copies of the attached comments, to the President and subsequently to the Congress in accordance with that Act.

Respectfully yours,

(Signed) KENNETH MARKWELL,
Acting Commissioner.

Approved and adopted November 11, 1948.

(Signed) J. A. KRUG,
Secretary of the Interior.

OFFICE OF THE SECRETARY,
Washington 25, D. C., November 11, 1948.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: Attached is my report on the Solano County Project, California. This report is transmitted to you pursuant to Section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

The report was prepared by the Bureau of Reclamation. The Commissioner of Reclamation recommends authorization for construction of a dam and storage reservoir at the Monticello site, a diversion dam, main canal, and the necessary wasteways, laterals, and drainage works. The project would provide water to irrigate 83,000 acres and would alleviate shortages in domestic and industrial water supplies at a number of cities and important military installations in the vicinity. The Commissioner indicates that the entire cost of the project would be returned to the Federal government within a 50 year period by the users of irrigation, municipal, and industrial water.

The report has been transmitted to the State of California and to the Secretary of the Army for their views and recommendations, as required by the provisions of the Flood Control Act of 1944 (58 Stat. 887), and to the State of California for the comments of the head of the agency exercising administration over the wildlife resources of that State, as required by the provisions of the Act of August 14, 1946 (60 Stat. 1080). In addition, the report was transmitted to the Department of Agriculture, the Department of Commerce, and the Federal Power Commission. Copies of the comments received in response to these transmittals, all of which are favorable or raise no objections, are attached.

I find that the proposed construction has engineering feasibility; that the estimated cost of the proposed construction is \$45,577,000; that the part of the estimated cost which can properly be allocated to irrigation and probably be repaid by the water users is \$38,599,000; that the part of the estimated cost which can properly be allocated to municipal water supply or other miscellaneous purposes and probably be returned to the United States is \$5,048,000; and that the part of the estimated cost which can properly be allocated to flood control is \$1,930,000. The total of the repayable and returnable allocations to irrigation and to municipal water supply or other miscellaneous purposes, together with the non-reimbursable allocation to flood control, equals the total estimated cost of construction.

The requirements of Section 9 (a) of the Reclamation Project Act of 1939 and of Section 1 (c) of the Flood Control Act of 1944 having been met, I find that the Solano County Project is author-

ized for construction in accordance with the Federal Reclamation laws.

Unless you have objection, the report and other documents enclosed will be transmitted to the Congress in accordance with the provisions of the Reclamation Project Act of 1939.

Sincerely yours,

(Signed) J. A. KRUG,
Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington 25, D. C., January 26, 1949.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This will acknowledge receipt of your letter dated November 11, 1948, transmitting a copy of your proposed report on the Solano County Project, California.

The Commissioner of Reclamation, in his report to you, proposes the construction of a dam and storage reservoir at the Monticello site, a diversion dam, main canal and necessary wasteways, laterals, and drainage works, at a total estimated cost of \$45,577,000 on the basis of January 1948 prices. He states that the proposed project is urgently needed to provide a dependable water supply for important national defense establishments in Solano County, for municipal and industrial uses, and for the irrigation of 83,000 acres of land. Flood control, recreation and fish and wildlife benefits are also expected from the project. You find that the project has engineering feasibility and that the total repayable and returnable allocations to irrigation and to municipal water supply or other miscellaneous purposes, together with the non-reimbursable allocation to flood control, equals the total estimated cost of construction. Accordingly, you find that the project is authorized in accordance with the Federal Reclamation Laws.

Analysis of the report indicates that the proposed repayment plan provides, on the basis of the estimates contained in the report, for the return of the cost of the project in 50 years. The Commissioner of Reclamation states that any increase or decrease in construction costs would not be covered by adjustments in water rates but would be reflected in extensions or reductions, as the case may be, of the period during which construction costs are returned by collections from irrigation, domestic and industrial, and other water users. It is noted that the method of repayment proposed for this project, through sale of water under the provisions of Sections 9 (c) and 9 (e) of the Reclamation Project Act of 1939, is the same as that contemplated under the Cachuma Unit of the Santa Barbara County Project which was the subject of my letter to you of March 24, 1948. I wish to re-emphasize at this

time my statement in that letter that we should move cautiously in any action which might set a precedent for approving projects involving a departure from the customary 40-year repayment period policy contemplated under existing Reclamation laws. However, the Solano County Project appears to be justified from the standpoint of the extremely important national defense needs as well as the water supply benefits for the entire San Francisco Bay area.

It is noted that in lieu of requiring interest to be paid on the unpaid balances due on costs allocated to domestic and industrial water supply, payments would be continued beyond the 29-year period required to retire such costs for an additional period of 21 years, and such payments would be applied to repayment of irrigation costs. Under this method, payments by domestic and industrial water users, together with repayments by irrigation water users within their ability to repay, are estimated to equal all reimbursable costs over a 50-year period.

It is also noted that the Governor of California favors construction of the project, and the Departments of the Army, Navy, Agriculture, and Commerce, and the Federal Power Commission either favor its construction or offer no objection. It appears that the proposed project does not conflict with any other existing or proposed major developments in the Central Valley and will become an integral part of any sound over-all plan which may be adopted for the development of the water resources of the valley.

In accordance with the authority delegated to me in the letter of the President dated July 2, 1946, you are advised that there would be no objection to the submission of the report to Congress. However, it would be appreciated if you would include a copy of this letter with your submission.

Sincerely yours,

(Signed) FRANK PACE, JR.,
Director.

UNITED STATES DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., January 28, 1949.

Hon. ALBEN W. BARKLEY,
President of the Senate.

MY DEAR MR. VICE-PRESIDENT: In accordance with the provisions of Section 9 of the Reclamation Project Act of 1939 I submit herewith my report and findings on the Solano County Project in the Central Valley Basin of California. The Solano County Project consists of a dam and storage reservoir on Putah Creek at the Monticello site, a diversion dam, main canal, and the necessary wasteways, laterals, and drainage works. The project would provide water to irrigate 83,000 acres and would alleviate

shortages in domestic and industrial water supplies at a number of cities and important military installations in the vicinity.

My report and findings are contained in the attached letter, dated November 11, 1948, addressed to the President and incorporated herein by reference.

There has been uniform approval of the project by all of the Federal agencies which have primary concern with the development of water resources. The Departments of the Army, Air Force, and Navy have all urged that the proposed construction be undertaken promptly in order to alleviate the effects of the critical water supply situation on the important military establishments in the area. While repayment of only a portion of the total project cost is identified with keeping these establishments supplied with water, the necessity for supplying these water needs at this time is practically compelling. The multiple-purpose Solano County Project is the only satisfactory solution available.

The total estimated cost of the proposed construction is \$45,577,000, of which \$26,699,000 is allocated to irrigation; \$11,900,000 is for a distribution system for irrigation water; \$5,048,000 is allocated to domestic and industrial water supplies, and \$1,930,000 is allocated to flood control. The financial analysis for the project, which is prepared upon the basis of repayment of appropriate costs within 50 years, is on the basis of repayment at the rate of \$3.80 per acre foot for irrigation water supplies, and a charge of \$10 per acre foot for water sold for domestic and industrial water supplies. The domestic and industrial water users will assist in the repayment of the total cost of water to an extent that will reduce the ultimate charges to the irrigators. Their repayments are shown to approximate \$11,600,000. Repayments by the irrigators are thus shown to approximate \$20,200,000 for the reservoirs, main canals and related facilities, and \$11,900,000 for the distribution system, if that work is undertaken by the Bureau. The cost of the distribution system will be repaid in 40 years.

The views and recommendations of the Governor of the State of California and the Secretary of the Army obtained pursuant to Section 1 of the Flood Control Act of 1944 (58 Stat. 887) are incorporated in the enclosed documents. The requirements of Section 9 (a) of the Reclamation Project Act of 1939 and of Section 1 of the Flood Control Act of 1944 having been met, I find that the Solano County Project is authorized for construction in accordance with the Federal Reclamation Laws.

On November 11, 1948, this report was submitted to the President. The Director of the Bureau of the Budget, noting the importance of the project to national defense needs as well as the water supply benefits, and the unanimity of the State and Federal agencies with respect to its meritorious character, has advised there is no objection to the submission of this report to the Congress. A copy of his letter is attached.

Sincerely yours,

(Signed) J. A. KRUG,
Secretary of the Interior.

LAKE BERRYESSA

An act to designate the reservoir above the Monticello Dam in California as Lake Berryessa.
(Act of April 27, 1956, 70 Stat. 118, Public Law 494, 84th Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the reservoir located above the Monticello Dam in Napa County, California, shall hereafter be known as Lake Berryessa, and any law, regulation, document, or record of the United States in which such reservoir is designated or referred to shall be held to refer to such reservoir under and by the name of Lake Berryessa.

STRAWBERRY VALLEY PROJECT

UTAH

The Strawberry Valley project was authorized by the Secretary on December 15, 1905, under the Reclamation Act of 1902 (32 Stat. 388); examined and reported upon by a Board of Army Engineers and approved by the President on January 5, 1911, pursuant to the act of June 25, 1910 (36 Stat. 835).

UNITED STATES GEOLOGICAL SURVEY,
September 8, 1905.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: Investigations by the Reclamation Service have been in progress in the State of Utah for over two years. These have extended to the reconnaissance of the Bear Lake and Bear River Basin and the possibilities of irrigation therefrom. These have been found to be very expensive and of such magnitude and doubtful feasibility as not to justify detailed surveys at the present time. The same is true of the Weber River basin.

More detailed investigations have been made of Utah Lake and the possibilities of its development but these have failed to develop a feasible project.

Investigations have also been made of a reservoir site in Strawberry Valley on one of the tributaries of the Duchesne River, and it has been found that water can be stored in that valley and taken to the Spanish Fork by means of a tunnel. The capacity of the reservoir will be approximately 100,000 acre-feet, and the tunnel would be about 19,000 feet in length. Borings have been made along the line of the tunnel, and no unusual difficulties have been discovered which might threaten the success of the project.

The lands which can be covered by the combination of stored water from Strawberry Valley and the natural flow of Spanish Fork are about 50,000 acres in area, approximately one half of which is now irrigated, but a large portion of which irrigated land has an insufficient water supply. The land is all in private ownership and the owners have formed a water users' association,

the purpose being to bring all of these lands into the association to subscribe for the Government project, the rates to be equitably fixed as provided for in the Reclamation Act, the distribution of payments among the various ownerships to be proposed by the water users' association for departmental approval. The project is estimated to cost approximately \$1,250,000, but this may be increased owing to the uncertainties of estimates in a long tunnel.

A board of engineers, consisting of Messrs. Savage, Quinton, Sanders and Swendsen, recently examined the location and surveys, with a view to the construction of this project under the provisions of the Reclamation Act. This board reports the project as feasible and recommends its construction as soon as the people owning the land to be irrigated have complied with the requirements of the Reclamation Act in assuring the return of the fund under the conditions imposed by the Act, and proper adjustments of water rights of Spanish Fork and its tributaries have been made.

I have the honor to concur with the recommendations of the board of engineers, and to recommend that the Strawberry Valley Project receive the preliminary approval of the Department and I be authorized to announce to the water users' association that as soon as the people have made the proper adjustment of water rights and guaranteed the return of the Reclamation fund in a manner acceptable to the Department, construction on the system will be promptly undertaken.

Very respectfully,

(Signed) H. C. RIZER,
Acting Director.

UNITED STATES GEOLOGICAL SURVEY,
RECLAMATION SERVICE,
Salt Lake City, Utah, October 2, 1905.

Mr. F. H. NEWELL,
Chief Engineer, Reclamation Service, Washington, D. C.

DEAR SIR: The undersigned Board of Engineers have considered the status of the Strawberry Valley Project and the plans of Mr. Geo. L. Swendsen looking to its early construction.

A meeting of the prominent land and water owners concerned in the project was held at Spanish Fork October first which we attended, where many questions of policy and law were discussed by Mr. Bien.

We find that nearly nine-tenths of the land holdings concerned have been pledged to the support of the proposition, and it is the aim and determination of the people to secure a very thorough cooperation of all the water rights in the district. There appears to be no opposition to the project, and the people are showing a

highly cooperative spirit. It is probable that within a very short time all the owners of land will have signed proper agreements, and the Government will be justified in taking up the construction.

The land is all in private ownership, and about 97% is in holdings of eighty acres or less. From every point of view the project is a meritorious one, and eminently adapted to the purposes and provisions of the Reclamation Act.

In the estimate recently made of the prospective state of the Reclamation Fund June 30, 1908, no account was taken of prospective returns from irrigated lands under the provisions of the Act. These returns will begin in 1906, will become important in 1907, and in 1908 should be over two millions per annum, and thereafter approximately three millions per annum. We are confident that the state of the Fund justifies undertaking the Strawberry Valley Project, which being a tunnel will require a long time in construction, and a slow expenditure of money.

We respectfully recommend that the Honorable Secretary of the Interior be requested to reconsider the withdrawal of his approval of the Strawberry Valley Project, and that construction thereon be authorized and commenced as soon as the people have their affairs in proper shape, which will apparently be in the very near future.

No project has yet been undertaken in Utah, and the one proposed is not large, and is one of the most meritorious ones that has been presented to the Reclamation Service.

Very respectfully,

(Signed) A. P. DAVIS,
Assistant Chief Engineer.
MORRIS BIEN,
Supervising Engineer.
J. H. QUINTON,
Supervising Engineer.
W. H. SANDERS,
Consulting Engineer.

UNITED STATES GEOLOGICAL SURVEY,
Washington, D. C., December 15, 1905.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: Replying to your inquiry of December 14, I beg to state that as yet there has not been reported to this office a feasible and practicable reclamation project in the Territory of Oklahoma, such as is evidently covered by the provisions of Section 9 of the Reclamation Act. A board of engineers has recently examined and passed upon the surveys and estimates prepared for work in that Territory, and under date of November 18 has recommended certain further investigations, the results of which will probably be available in the spring of 1906. Until these further facts are

determined, it is not possible to state that there is a feasible project now known in the Territory.

In view of this fact, I respectfully recommend that the sum of \$1,250,000 be set aside under the usual conditions for the construction of what is known as the Strawberry Valley project in Utah, referred to in my letters of September 8 and October 17, 1905.

Very respectfully,

(Signed) CHAS. D. WALCOTT,
Director.

OFFICE OF THE SECRETARY,
Washington, December 15, 1905.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: Referring to your letter of September 8th last, recommending for reasons stated therein that the Strawberry Valley Reclamation project in Utah be approved, and to the subsequent correspondence between your office and the Department on that subject, including your letter of even date herewith, in which you recommend that the sum of \$1,250,000 be set aside under the usual conditions for the construction of said project, you are advised that after a careful consideration of the matter your recommendation is concurred in, provided, however, that this action is based upon the provision and condition that all of the complications involved be adjusted, including all conflicts that may exist in regard to water rights; that a sufficient acreage be pledged to secure the return to the Reclamation Fund of the cost of construction; and that a clean-cut, feasible reclamation project, free from all complications or difficulties of any kind or character be secured, before a dollar is spent in construction.

I have been very largely influenced in taking this action by the following paragraph in the report of the Board of Engineers, dated October 2, 1905, the signatures to which are headed by Mr. Arthur P. Davis, Assistant Chief Engineer of the Reclamation Service:

In the estimate recently made of the prospective state of the Reclamation Fund June 30, 1908, no account was taken of the prospective returns from irrigated lands under the provisions of the Act. These returns will begin in 1906, will become important in 1907, and in 1908 should be over two millions per annum, and thereafter approximately over three millions per annum. We are confident that the state of the fund justifies undertaking the Strawberry Valley project, which, being a tunnel, will require a long time in construction, and a slow expenditure of money.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

SUN RIVER PROJECT

MONTANA

The Sun River project was authorized by the Secretary on February 26, 1906, under the Reclamation Act of 1902 (32 Stat. 388) ; examined and reported upon by a Board of Army Engineers and approved by the President on January 5, 1911, pursuant to the act of Congress June 25, 1910 (36 Stat. 835).

The Sun River Extensions Unit was reauthorized as part of the Missouri River Basin project under the terms of the Flood Control Act of 1944.

UNITED STATES GEOLOGICAL SURVEY,
February 13, 1906.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: I have received by Departmental reference a letter, dated February 7, from Hon. Jos. M. Dixon, enclosing a communication from the Sun River delegation, signed by J. G. Bair, chairman, under date of February 5. This communication sets forth the attractions of the Sun River project and the claims of the people of that vicinity to the consideration of the Government and urges the construction of the Sun River project under the provisions of the Reclamation Act.

It is entirely true that the project is feasible and attractive from every point of view, and that the people have exhibited a cooperative spirit in adjusting water rights and otherwise rendering it possible for work to begin in this vicinity.

In the present state of the reclamation fund, however, it is not possible to undertake any new project beyond those already approved by the Department without occasioning embarrassing delays in the construction of the projects undertaken.

I respectfully recommend that the Sun River project be formally approved for future construction and that Mr. Bair be informed of the condition of the reclamation fund and the impossibility of undertaking construction work on this project in the immediate future.

I further recommend that Mr. Bair be informed that the United States will not obstruct in any manner any enterprise which the people themselves or private capital may desire to construct so

long as it does not prevent the ultimate development of a comprehensive project under this system.

Very respectfully,

(Signed) CHAS. D. WALCOTT,
Director.

DEPARTMENT OF THE INTERIOR,
Washington, February 26, 1906.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: On the 13th instant you reported on a letter of the 7th instant from Hon. J. M. Dixon covering a communication of the 5th instant from Mr. J. G. Bair, Chairman, Sun River delegation setting forth the desirability of the construction of the Sun River Project, Montana.

You have stated that the project is entirely feasible and attractive from all points of view but that it is not possible, in the present state of the Reclamation Fund, to undertake any new project beyond those already approved without occasioning embarrassing delays in their construction.

You have, however, recommended that the project be formally approved for future construction.

In view of your recommendation I hereby approve the Sun River Project, the work of construction not to be undertaken till such time as you are formally authorized to proceed therewith.

In a letter of even date Mr. Bair has been suitably informed in the premises.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

GREENFIELDS DIVISION

PROVISIONS OF INTERIOR DEPARTMENT APPROPRIATION ACTS, 1926 AND 1927

[Extracts from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1926, and for other purposes. (Act of March 3, 1925, 43 Stat. 1141, 1142, 1143, and 1165-1172, Public Law 580. 68th Cong., 2d sess.)

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Sun River project, Montana: For operation and maintenance, continuation of construction, and incidental operations, \$611,000:

Provided, That no part of this appropriation shall be used for construction purposes until a contract or contracts in form approved by the Secretary of the Interior shall have been made with an irrigation district or with irrigation districts organized under State law providing for payment by the district or districts as hereinafter provided. The Secretary of the Interior shall by public notice announce the date when water is available under the project: *Provided further*, That no part of the sum hereby appropriated shall be expended for the construction of new canals or for the extension of the present canal system for the irrigation of lands outside of the forty thousand acres for the irrigation of which a canal system is now provided until a contract or contracts shall have been executed between the United States and the State of Montana whereby the State shall assume the duty and responsibility of promoting the development and settlement of the project after completion, securing, selecting, and financing of settlers to enable the purchase of the required livestock, equipment, and supplies and the improvement of the lands to render them habitable and productive. The State shall provide the funds necessary for this purpose and shall conduct operations in a manner satisfactory to the Secretary of the Interior: *Provided further*, That the operation and maintenance charges on account of land in this project shall be paid annually in advance not later than March 1, no charge being made for operation and maintenance for the first year after said public notice. It shall be the duty of the Secretary of the Interior to give such public notice when water is actually available for such lands. * * *

[Extracts from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1927, and for other purposes. (Act of May 10, 1926, 44 Stat. 453, 479, 481, Public Law 206, 69th Cong., 1st sess.)

* * * * *

No part of the sums provided for in this act for the Sun River, Owyhee, Vale, and Baker projects shall be expended for construction purposes until a contract or contracts in form approved by the Secretary of the Interior shall have been made with an irrigation district or irrigation districts organized under State law providing for payment by the district or districts of the cost of constructing, operating, and maintaining the works during the time they are in control of the United States, such cost of constructing to be repaid within such terms of years as the Secretary may find to be necessary, in any event not more than forty years from the date of public notice hereinafter referred to, and the execution of said contract or contracts shall have been confirmed by a decree of a court of competent jurisdiction. Upon such confirmation of such contract as to any one of such projects, the construction thereof shall proceed in accordance with any appropriations therefor provided for in this act. Prior to or in connection with the settlement and development of each of these projects, the Sec-

retary of the Interior is authorized in his discretion to enter into agreement with the proper authorities of the State or States wherein said projects or divisions are located whereby such State or States shall cooperate with the United States in promoting the settlement of the projects or divisions after completion and in the securing and selecting of settlers. Such contract or contracts with irrigation districts hereinbefore referred to shall further provide that all irrigable land held in private ownership by any one owner in excess of one hundred and sixty irrigable acres shall be appraised in a manner to be prescribed by the Secretary of the Interior and the sale prices thereof fixed by the Secretary on the basis of its actual bona fide value at the date of appraisal without reference to the proposed construction of the irrigation works; and that no such excess lands so held shall receive water from any project or division if the owners thereof shall refuse to execute valid recordable contracts for the sale of such lands under terms and conditions satisfactory to the Secretary of the Interior and at prices not to exceed those fixed by the Secretary of the Interior; and that until one-half the construction charges against said lands shall have been fully paid no sale of any such lands shall carry the right to receive water unless and until the purchase price involved in such sale is approved by the Secretary of the Interior and that upon proof of fraudulent representation as to the true consideration involved in such sales the Secretary of the Interior is authorized to cancel the water right attaching to the land involved in such fraudulent sales: *Provided further*, That the operation and maintenance charges on account of lands in said projects and divisions shall be paid annually in advance not later than March 1. It shall be the duty of the Secretary of the Interior to give public notice when water is actually available, and the operation and maintenance charges payable to the United States for the first year after such public notice shall be transferred to and paid as a part of the construction payment:

* * * * *

Sun River project, Montana: For operation and maintenance, continuation of construction, and incidental operations, \$59,000: *Provided*, That the unexpended balance of the appropriation of \$611,000 for the fiscal year 1926 made available by the act of March 3, 1925 (43 Stat. p. 1167), shall remain available for the fiscal year 1927: *Provided*, That the restrictions carried elsewhere in this act upon the use of appropriations for construction purposes upon the Sun River and certain other projects shall not be deemed to apply to the construction of the Beaver Creek Reservoir.

* * * * *

TRUCKEE STORAGE PROJECT

NEVADA-CALIFORNIA

The Truckee Storage¹ project, originally called Truckee River Storage project, was found feasible by the Secretary on July 18, 1935, and approved by the President on September 21, 1935, pursuant to section 4 of the act of June 25, 1910 (36 Stat. 836) and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702).

OFFICE OF THE SECRETARY,
Washington, July 18, 1935.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The Supreme Court of the United States in the Parker Dam decision (*United States v. State of Arizona*) indicated that Section 4 of the Act of June 25, 1910, 36 Stat. 835, is applicable to irrigation projects constructed under the National Industrial Recovery Act, and this report upon the Truckee Storage project is made to you under said statute of 1910 and under Subsection B of Section 4 of the Act of December 5, 1924, 43 Stat., 701.

Section 4 of the Act of June 25, 1910, provides, in effect that after the date of that act no irrigation project to be constructed under the Act of June 17, 1902, 32 Stat., 388 and acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924, 43 Stat., 701, provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information

¹ Construction for additional storage on the Newlands Project was initiated under the provisions of the National Industrial Recovery Act of 1933, but the funds were transferred to the *Truckee River Storage Project* on February 5, 1934.

in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

Under date of August 30, 1933, I approved an allotment of \$1,500,000 for the construction of upstream storage on the Truckee River, Nevada, \$1,000,000 of which is still available. The water developed in the proposed reservoir will be used on some 30,000 acres of patented land near Reno, Nevada, embraced in the Washoe County Water Conservation District, which is preparing to enter into a contract with the United States to repay the cost of the work over a term of 40 years without interest.

The water supply developed in the proposed reservoir will also benefit the Newlands (formerly Truckee-Carson) irrigation project in Western Nevada, one of the first projects undertaken by the Bureau of Reclamation (then known as the Reclamation Service). The project was authorized in 1903 and construction began in 1904. The water supply is obtained from the Truckee and Carson Rivers with storage in the Lahontan reservoir of 273,000 acre feet capacity. The project has an irrigable area of 87,500 acres included in the Truckee-Carson Irrigation District with which the Government has a contract for repayment of the construction cost. Over 90 per cent of the project construction and operation and maintenance charges due to date has been paid.

There is need of a supplemental water supply upon the lands in these two districts, as for many years losses have been suffered because of an inadequate supply.

The proposed Little Truckee storage reservoir on the Little Truckee River will augment the supply for the lands in the two districts, and in particular will benefit the lands on the Fernley and Swingle benches of the Newlands project. These lands depend upon Truckee River water as they are above the Lahontan reservoir serving other project lands.

This storage will also provide additional water urgently needed for irrigated lands in the Truckee Meadows near Reno, and afford a better water supply for the cities of Reno and Sparks.

Studies which have been made by the Bureau of Reclamation indicate that the water supply is adequate for the proposed reservoir, that the construction of the proposed dam is feasible from an engineering standpoint, that the dam can be built within the cost of \$1,000,000 which the Washoe County Water Conservation District is to agree to pay. The reservoir will not be constructed if, upon calling for bids, it is found that the cost of the dam will probably overrun \$1,000,000, unless the Washoe County Water Conservation District by contract increases the amount of its obligation to cover the additional estimated cost.

The land in the Washoe County Water Conservation District will be appraised, subject to Departmental approval, to determine its present value without enhancement of valuation due to the prospect of an additional water supply from the proposed storage reservoir. Water will not be delivered to any landowner from such

proposed reservoir unless he adopts the appraised valuation by agreeing that if his land is sold above such valuation, one-half of the excess will be paid over for the benefit of the project. Large landowners (that is owners of more than 160 irrigable acres per single ownership) will be required to dispose of the excess area at or below prices fixed by an approved appraisal, if project water is furnished for the excess area.

I find that the project is feasible, that the land watered thereby is adaptable for actual settlement and farm homes, and that the landowners benefited by the project will be able from the agricultural produce of the lands irrigated by the reservoir to return the cost of the development to the United States.

I recommend that the project be approved and that necessary authority be issued to this Department to make contracts for the construction of the project and to proceed with the work.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved September 21, 1935.

(Signed) FRANKLIN D. ROOSEVELT,
President.

TUCUMCARI PROJECT

NEW MEXICO

The Tucumcari project was found feasible by the Secretary on October 31, 1938, and approved by the President on November 1, 1938, under the provisions of the act of April 9, 1938 (52 Stat. 211).

THE WHITE HOUSE,
Washington, August 2, 1937.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: I am approving, with some reluctance, the enrolled bill S. 2086, "To authorize the construction of a Federal reclamation project to furnish a water supply for the lands of the Arch Hurley Conservancy District in New Mexico."

The necessity for, or desirability of, this legislation is not apparent in view of the statement in the letter of Acting Secretary West which accompanied the enrolled bill, that:

The plans so far made entail a total cost of \$8,278,000, or \$184 per acre, which under present Reclamation laws would render the project infeasible. However, by a revision of plans or by some other means, the repayment of the investment may become possible.

It seems to me that a determination of the feasibility of the project and of the probability of its repayment of construction costs, through the use of funds that are available to the Bureau of Reclamation for such investigations of proposed Reclamation projects, should have been a prerequisite to the consideration of legislation authorizing the construction of the project.

I am persuaded, however, to approve this bill only because of the provision which it contains forbidding the initiation of construction work on the project unless and until you are able to make a finding, under Subsection B of Section 4 of the Act of December 5, 1924, that the project is economically feasible and will in all probability return its construction cost.

In view of the fact that the Reclamation Fund will be exhausted

by the end of the present fiscal year and that its income for the next few years will be no more than enough to provide for the projects now under construction, I shall not be disposed to hereafter submit an estimate of appropriation for beginning the construction of the project covered by the enrolled bill until I am thoroughly satisfied that this project is feasible and will repay the cost of its construction.

Sincerely yours,

(Signed) FRANKLIN D. ROOSEVELT,
President.

An act to authorize the construction of a Federal reclamation project to furnish a water supply for the lands of the Arch Hurley Conservancy District in New Mexico. (Act of August 2, 1937, 50 Stat. 557, Public Law 241, 75th Cong., 1st sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Interior is hereby authorized to construct a Federal reclamation project for the irrigation of the lands of the Arch Hurley Conservancy District in New Mexico under the Federal reclamation laws: *Provided*, That construction work is not to be initiated on said irrigation project until (a) the project shall have been found to be feasible under subsection B of section 4 of the Act of December 5, 1924 (43 Stat. 702), and (b) a contract shall have been executed with an irrigation or conservation district embracing the land to be irrigated under said project, which contract shall obligate the contracting district to repay the cost of construction of said project in forty equal annual installments, without interest: (c) contracts shall have been made with each owner of more than one hundred and sixty irrigable acres under said project, by which he, his successors, and assigns shall be obligated to sell all of his land in excess of one hundred and sixty irrigable acres at or below prices fixed by the Secretary of the Interior and within the time to be fixed by said Secretary, no water to be furnished to the land of any such large landowner refusing or failing to execute such contract; and (d) contracts shall have been made with all owners of lands to be irrigated under the project by which they will agree that if their land is sold at prices above the appraised value thereof, approved by said Secretary, one-half of such excess shall be paid to the United States to be applied in the inverse order of the due dates upon the construction charge installments coming due thereafter from the owners of said land.

An act to amend an act entitled "An act to authorize the construction of a Federal reclamation project to furnish a water supply for the lands of the Arch Hurley Conservancy District in New Mexico," approved August 2, 1937 (Public, Numbered 241). (Act of April 9, 1938, 52 Stat. 211, Public Law 477, 75th Cong., 3d sess.)

* * * That the Act entitled "An Act to authorize the construction of a Federal reclamation project to furnish a water supply

for the lands of the Arch Hurley Conservancy District in New Mexico," approved August 2, 1937 (Public, Numbered 241), is amended to read as follows:

That the Secretary of the Interior is hereby authorized to construct a Federal reclamation project for the irrigation of the lands of the Arch Hurley Conservancy District in New Mexico under the Federal reclamation laws: *Provided*, That construction work is not to be initiated on said irrigation project until (a) the project shall have been found to be feasible under subsection B of section 4 of the Act of December 5, 1924 (43 Stat. 702), but the project may be found to be financially feasible if the Secretary of the Interior finds that the amount to be expended from the reclamation fund can be repaid by the District, and further that the amount of money to be expended from the reclamation fund, plus the amount of money which has been made available from other sources (for the estimated period of construction), equals the estimated cost of construction; (b) a contract shall have been executed with an irrigation or conservation district embracing the land to be irrigated under said project, which contract shall obligate the contracting district to repay the cost of construction of said project met by expenditure of moneys from the reclamation fund in forty equal annual installments, without interest; (c) contracts shall have been made with each owner of more than one hundred and sixty irrigable acres under said project, by which he, his successors, and assigns shall be obligated to sell all of his land in excess of one hundred and sixty irrigable acres at or below prices fixed by the Secretary of the Interior and within the time to be fixed by said Secretary, no water to be furnished to the land of any such large landowner refusing or failing to execute such contract; and (d) contracts shall have been made with all owners of lands to be irrigated under the project by which they will agree that if their land is sold at prices above the appraised value thereof, approved by said Secretary, one-half of such excess shall be paid to the United States to be applied in the inverse order of the due dates upon the construction charge installments coming due thereafter from the owners of said land.

OFFICE OF THE SECRETARY,
Washington, October 31, 1938.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The following report on the Tucumcari Irrigation project, in the state of New Mexico, is made to you under the provisions of Section 4 of the Act of June 25, 1910 (36 Stat. 835).

This section of the Act provides in effect that after the date of said Act, no irrigation project to be constructed under the Act of June 17, 1902 (32 Stat. 388) and Acts amendatory thereof or supplementary thereto, shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by direct order of the President.

Subsection B, Section 4, Act of December 5, 1924, (43 Stat. 701) provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information

in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development, and he shall have made a finding in writing that it is feasible, and that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

Other legislation pertaining specifically to this project is the Act approved August 22, 1937 (50 Stat. 557), which was amended by the Act of April 9, 1938 (Public No. 477, 75th Congress). As amended the Act provides:

That the Secretary of the Interior is hereby authorized to construct a Federal reclamation project for the irrigation of the lands of the Arch Hurley Conservancy District in New Mexico under the Federal reclamation laws: *Provided*, That construction work is not to be initiated on said irrigation project until (a) the project shall have been found to be feasible under subsection B of section 4 of the Act of December 5, 1924 (43 Stat. 702), but the project may be found to be financially feasible if the Secretary of the Interior finds that the amount to be expended from the reclamation fund can be repaid by the District, and further that the amount of money to be expended from the reclamation fund, plus the amount of money which has been made available from other sources (for the estimated period of construction), equals the estimated cost of construction; (b) a contract shall have been executed with an irrigation or conservation district embracing the land to be irrigated under said project, which contract shall obligate the contracting district to repay the cost of construction of said project met by expenditure of moneys from the reclamation fund in forty equal annual installments, without interest; (c) contracts shall have been made with each owner of more than one hundred and sixty irrigable acres under said project, by which he, his successors, and assigns shall be obligated to sell all of his land in excess of one hundred and sixty irrigable acres at or below prices fixed by the Secretary of the Interior and within the time to be fixed by said Secretary, no water to be furnished to the land of any such large landowner refusing or failing to execute such contract; and (d) contracts shall have been made with all owners of lands to be irrigated under the project by which they will agree that if their land is sold at prices above the appraised value thereof, approved by said Secretary, one-half of such excess shall be paid to the United States to be applied in the inverse order of the due dates upon the construction charge installments coming due thereafter from the owners of said land. Approved, April 9, 1938.

Approximately 45,000 acres of land lying near Tucumcari, Quay County, New Mexico, are expected to be irrigated under the Tucumcari project. The irrigation plan includes a main canal, 55 miles in length, leading from the Conchas Reservoir to the project lands, a lateral system to distribute water to the project farms, and a drainage system which will be built as seepage conditions develop.

WATER SUPPLY

The water supply will be obtained from the Conchas Reservoir which is now being constructed as a flood control project on the South Canadian River by the Corps of Engineers of the War Department. The dam is located immediately below the confluence of the Conchas and South Canadian Rivers, about 35 miles northwest of Tucumcari. Studies based on the water supply records for the last 22 years indicate that there would have been an ample

supply for irrigation in all excepting 7 years, in 6 of which there would have been light shortages and a major shortage in 1 year. If found necessary, the shortages could be reduced by pumping from dead storage in the reservoir below the elevation of the outlet works. The state of New Mexico has a filing covering the storage of water in and use of water from the reservoir and will be required to transfer these filings to the Federal Government. A memorandum of understanding also will be obtained with the Corps of Engineers of the War Department regarding the operation of the reservoir for flood control and irrigation purposes.

ENGINEERING FEATURES AND CONSTRUCTION COSTS

The principal construction features are as follows:

(1) The Conchas dam and reservoir—The dam is a combination concrete and earth embankment structure of 220 feet maximum height and 1,250 feet total length along the crest. A short spillway is located at the main dam across the stream and a higher, longer, emergency spillway is placed at one side. The outlet works will be located approximately 100 feet above the stream bed. The reservoir will extend approximately 14 miles up the Canadian and Conchas Rivers. Its total capacity will be approximately 400,000 acre-feet below the lower spillway, of which 286,000 acre-feet will be available above the irrigation outlet, the remaining 114,000 acre-feet being dead storage.

(2) The main canal, of 700 cubic-feet per second capacity, will extend from Conchas reservoir to the project lands, a distance of approximately 55 miles. The canal structures include several tunnels, to avoid side hill construction or long detours, and numerous siphons crossing deep and wide drainage courses. Under the present plans, there will be 5 tunnels, varying from a few hundred feet up to 9,000 feet in length and more than 30 siphons, several of which are more than a half mile in length.

(3) A distribution system, consisting of laterals of various lengths and capacities, to carry the water from the canals to the farm units.

(4) A drainage system which will need to be started shortly after water is delivered and continue for an indefinite period. The large number of washes, canyons and creeks which traverse the project will eliminate the necessity for constructing an extensive drainage system. However, many of the creeks on the project which are dry most of the time will be turned into live streams by seepage and thus require the building of many bridges.

The estimated costs of construction are as follows:

Examination and surveys.....	\$100,000
Main canal	6,605,000
General lateral system.....	675,000
Drainage	450,000
Other costs	325,000
Total construction cost.....	8,150,000

LAND PRICES AND ADAPTABILITY OF LAND TO SETTLEMENT AND FARM HOMES

Most of the lands were homesteaded about 1907 in 160-acre tracts. A large portion of the area was once dry farmed but, when this did not prove successful, much of it was restored to native grasses for pasture use. The lands are held in tracts ranging from 20 to 7,000 acres. Approximately 500 settlers will be needed on account of the reduction of excess holdings to units of 160 acres or less and the occupation of the lands which will not be farmed by the owners.

The project is located in the heart of a large area devoted to the production of livestock. Irrigation would aid materially in stabilizing this industry and would provide a source of income in an area which is greatly in need of revenues from sources other than those now available. Under ordinary conditions, there are 50,000 head of cattle and 10,000 head of sheep in Quay County and an additional 100,000 head of cattle and 20,000 head of sheep in the adjacent portions of San Miguel and Harding Counties. It is believed, therefore, that the project will find an exceptionally good market for hay and grain products, not only locally but also in the Panhandle areas of Texas and Oklahoma. Furthermore, the project would be the only intensive farming area on the Southern Pacific and on the Chicago, Rock Island and Pacific Railways between central Kansas and the Rio Grande Valley, a distance of approximately 500 miles. Therefore, a good market should be available for the miscellaneous fruits and garden truck which can be grown in this area.

PROBABLE RETURN TO RECLAMATION FUND OF COST OF CONSTRUCTION

The estimated cost of constructing the irrigation features to serve an area of 45,000 acres is \$8,155,000. Basing the repayment construction costs on a 40-year period without interest, and the operation and maintenance costs on the charges now paid on similar projects, the annual per acre costs would be as follows:

Repayment of construction charges.....	\$4.53
Operation and maintenance.....	1.25
Total annual charge.....	5.78

From the experience of the Bureau of Reclamation on projects where weather, crop and market conditions are similar, it is believed that a charge in excess of \$4.00 per acre per annum will be burdensome to the landowners. Therefore, the construction charge repayment for irrigation use should be held at a figure not greater than \$2.75 per acre per annum. This would provide \$4,950,000 of the construction cost.

The Arch Hurley Conservancy District, comprising all the lands in Quay County that would be benefited by the project, including

the City of Tucumcari of 4,100 population, has been established under the provisions of Chapter 30 of the New Mexico Statutes, Annotated, Compilation of 1929, and acts amendatory thereto, including Chapter 50 of the Laws of 1931 and Chapter 37 of the Laws of 1934. Funds which are expected to be available to the District, other than those raised by special assessment, are:

- (1) An organization fund not to exceed 6 mills on each dollar of assessed valuation, for the first years only.
- (2) A guaranty fund not to exceed 2 mills on each dollar of assessed valuation, within the District, levied each year.
- (3) A conservation and development fund, not to exceed 10 percent of the special benefits appraised and confirmed.

It has been estimated that the increased valuation of the City of Tucumcari from development of the project would amount to \$3,500,000. On this basis, the 10 percent conservation and development fund would yield \$350,000 or \$8,750 annually for 40 years. The guaranty fund, permitting a levy of 2 mills on each dollar of assessed valuation, would net \$7,000 annually on a valuation of \$3,500,000.

Additional revenue might be received from the sale of water to the Southern Pacific Railroad and to the City of Tucumcari. Records indicate that the railroad hauls approximately 23,000,000 gallons of water into this region in one year, at an estimated cost of \$23,000. It is assumed that the railroad company could well afford to pay \$11,500 per year for a water supply. The City of Tucumcari has spent approximately \$25,000 in one year for the maintenance of a water system and it is assumed that the city could afford to pay \$6,000 per annum for delivery of water for municipal use.

Assuming that contracts could be negotiated for the use of water for irrigation, domestic and industrial purposes, as described above, the following amounts would be repaid each year:

Irrigation use, 45,000 acres at \$2.75 per acre.....	\$123,750
Conservancy funds, City of Tucumcari.....	15,750
Water supply for railroad.....	11,500
Water supply for Tucumcari.....	6,000
Total	<u>157,000</u>
Amounting in a period of 40 years to.....	6,280,000

Some of these proposed contracts might not materialize; therefore, it is believed that an amount of \$2,500,000 should be made available on a non-reimbursable basis to assure the financial success of the project.

FINDING REGARDING FEASIBILITY OF PROJECT

The Second Deficiency Appropriation Act for the fiscal year 1938 (Public No. 723, 75th Congress), made available the sum of

\$250,000 for commencing construction and on September 24 the Public Works Administration allotted \$2,500,000 for the project.

The Act of April 9, 1938 (Public No. 477), contains the following stipulation: "The project may be found to be financially feasible if the Secretary of the Interior finds that the amount to be expended from the Reclamation Fund can be repaid by the District and, further that the amount of money to be expended from the Reclamation Fund, plus the amount of money which has been made available from other sources (for the estimated period of construction), equals the estimated cost of construction." The Public Works Administration has made an allotment sufficient to pay the non-reimbursable costs of the project and the Congress has made an appropriation from the Reclamation Fund to initiate the project.

The foregoing data justify the conclusion that the project is feasible from an engineering standpoint; that it is adaptable for settlement and farm homes; and that it is economically feasible on the basis of repayment of \$5,655,000. I, accordingly, so find and declare. I recommend that construction of the Tucumcari project be undertaken as soon as compliance is obtained with the remaining provisions of the act of August 2, 1937 (50 Stat. 557), as amended by the act of April 9, 1938 (Public No. 477, 75th Congress).

Sincerely yours,

(Signed) HARRY SLATTERY,
Acting Secretary of the Interior.

Approved November 1, 1938.

(Signed) FRANKLIN D. ROOSEVELT,
President.

UMATILLA PROJECT

OREGON

The Umatilla ¹ project was authorized by the Secretary on December 4, 1905, under the Reclamation Act of 1902 (32 Stat. 388); examined and reported upon by a Board of Army Engineers pursuant to the act of June 25, 1910 (36 Stat. 835), and approved by the President on January 5, 1911.

PORTLAND, ORE.
October 27, 1905.

CHIEF ENGINEER,
U. S. Reclamation Service, Washington, D. C.

SIR: We, the Board of Engineers, appointed by you to report upon the various Reclamation Projects in the State of Oregon, excepting the Klamath Project, have the honor to report as follows:

Projects in the interior.—We find that measurements of streams on which projects in the interior of this State are dependent, have extended over too short a period of time to afford sufficient knowledge of the water supply available. We also find that present lack of transportation facilities will cause high cost of construction and uncertain value of lands and its products.

Owyhee project.—We find that the Owyhee Project, contemplating the irrigation from the Owyhee River of about 60,000 acres west of the Snake River and south of the town of Arcadia, requires an expenditure per acre in excess of what the land at present is likely to bear successfully.

Malheur project.—We find that the Malheur Project, contemplating the irrigation of 100,000 acres west of the Snake River north of Arcadia, may be estimated to cost, inclusive of ten years' maintenance, \$40.00 for land irrigated by gravity, and \$42.00 for land irrigated by pumping, which we consider well within the value of the land.

¹ The reconstruction of canals on the *Stanfield Division* was approved under the National Industrial Recovery Act of 1933. The *Birch Creek Feeder Canal* was constructed under the provisions of the National Industrial Recovery Act of 1933.

We find that many land owners under the Malheur Project consider the estimated charge per acre too high in comparison with the ability of settlers to pay.

We further find that Charles Altschul, representing the Willamette Valley and Cascade Mountain Road Grant owns about one quarter of the entire area proposed to be irrigated under this project, and that C. E. S. Wood, acting on behalf of Charles Altschul, expresses the opinion that not over two fifths of this land will successfully bear the lien to be placed upon it by the estimated water charges. The owner is nevertheless willing to agree to the ultimate sale of all of this land to persons competent to acquire water rights, upon the condition, however, that the time allowed him to consummate the sale shall include the entire time required for construction with an additional allowance of at least fifteen months including a full crop year. We consider this condition contrary to the spirit of the Reclamation Act, first: because it would leave it within the power of the present owner to keep all his lands from being settled upon and reclaimed for a considerable time after water, which must be reserved for such lands, is ready for delivery. Second: because this board can conceive of but one reason for the owner insisting upon such condition, namely: that he may be enabled to reap the benefit of development on adjoining lands under the project, increasing the burden of the purchaser and diminishing the security of the Government.

We, therefore, consider this condition inadmissible and see no reason why the policy of rejecting similar terms of landowners under other reclamation projects should be departed from in the present instance.

Umatilla Project.—We find that the Umatilla Project, which was originally intended to water 60,000 acres south of the Columbia River and west of the Umatilla River, as now planned contemplates the irrigation of about 20,000 acres of land east of the Umatilla River; that this land is of excellent quality, has good transportation facilities and is near to valuable markets; that the project is feasible, and that the land when irrigated will be ample security for the money expended on the project. About 8,000 acres of this land is owned by the Maxwell Land & Irrigation Co., who have built a canal system to irrigate its lands with flood waters from the Umatilla River. A proposition has been made by this company to turn over to the United States its irrigation works and water rights and to place its lands under the project and bind itself to the sale of its land, copy of which proposition is attached hereto.

Recommendations: We recommend:

First. That stream measurements in the interior of the State be continued where promising projects exist.

Second. That at the present time no action be taken in regard to the Owyhee Project.

Third. That no action be taken in regard to the Malheur Project until the land owners under said project present satisfactory evidence of their willingness to subscribe their lands, and to have their excess holdings disposed of by the time water may be ready

for delivery to settlers competent to subscribe, and that this recommendation be communicated to said land owners at the earliest practicable moment.

Fourth. That the sum of \$1,000,000 be set aside for the construction of the Umatilla Project, and that early action be taken, so that in the event of construction being authorized, water may be ready for delivery during the irrigation season of 1907.

Fifth. That construction of the Umatilla Project be authorized as soon as at least 15,000 acres of land shall have been pledged to the project.

Sixth. That the farm unit under the Umatilla Project be fixed at 40 acres and that desert claimants be permitted to prove up under the Reclamation Act for a maximum of 160 acres.

Seventh. That the proposition of the Maxwell Land & Irrigation Co. be accepted, provided said Company agrees to sell its excess lands in tracts not exceeding 40 acres.

BOARD OF ENGINEERS,
(Signed) A. P. DAVIS.
A. J. WILEY.
D. C. HENNY.

UNITED STATES GEOLOGICAL SURVEY,
November 8, 1905.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: The preliminary examinations of the Umatilla Project in Oregon have now been completed and it has been found that a project is feasible involving the irrigation of about 20,000 acres of land east of the Umatilla River.

The land in question is of excellent quality, has good transportation facilities and the opportunities for marketing the crops are excellent. The estimated cost of the project is about \$50.00 per acre, and the land will be ample security for the money expended.

About 8,000 acres of this land is owned by the Maxwell Land & Irrigation Company which has partially completed the construction of a canal system to irrigate its lands with the flood waters of the Umatilla River. A proposition has been made by this Company to turn over to the United States its irrigation works and water rights and to place its lands under the project and bind itself to make sale thereof in such manner as to conform to the provisions of the Reclamation Act. A copy of this agreement is herewith transmitted and its terms are reasonable and satisfactory.

The project will involve the expenditure of about \$1,000,000, and this sum would be available from the unassigned allotment, page 3 of my letter of October 14, 1905, as to the condition of the Reclamation fund.

The agreement of which the enclosure is a copy has been executed by the Company but has been returned for some technical corrections and a new description of the lands specified in paragraph 5, so that it shall be more definite. The copy herewith will suffice for the consideration of its conditions in order that the Department can pass upon the proposition.

It is recommended that the sum of \$1,000,000 be set aside for this project and that authority be given for proceeding with the project with a view to construction.

The works can be completed so that water may be delivered at some time during the irrigating season of 1907, if work is undertaken promptly. An early decision upon the recommendation will involve the saving of fully a year in the irrigation of these lands.

Very respectfully,

(Signed) CHARLES D. WALCOTT,
Director.

OFFICE OF THE SECRETARY,
Washington, December 4, 1905.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: In a communication dated November 8, 1905, relative to the Umatilla reclamation project in Oregon, you recommended that the sum of \$1,000,000 be set aside from the Reclamation fund for the construction of this project and that authority be given for proceeding with the project with a view to its construction. With your said communication you enclosed for the consideration of the Department copy of an agreement with the Maxwell Land & Irrigation Company concerning the purchase of its canal system.

In view of certain questions presented by that agreement it was returned to you under date of November 11 for further report upon certain specific propositions indicated in the reference.

You replied thereto under date of November 16, and the whole matter was referred to the Assistant Attorney General for an opinion upon the questions presented by said agreement, where it is now pending.

I am now, however, in receipt of your communication of the 1st instant relative to said project which presents it in a new aspect and calls attention to certain phases of the situation to which my attention has not heretofore been directed, one of which is that delay of definite action in regard to this matter will mean complication of the situation by the undoubted appearance and acquisition of private rights that would prohibit the future consideration of what you insist is an attractive proposition from a reclamation standpoint.

The Department can not and will not at this time attempt to commit itself in regard to the questions pending before the As-

sistant Attorney General on the proposed agreement with the Maxwell Land & Irrigation Company, heretofore submitted, nor to indicate what its ruling on those questions will be, nor to in any way hamper or embarrass their consideration and adjudication, but after further and more careful consideration of this matter it is believed that affirmative action may be taken in regard to this project without doing any of the things indicated concerning the legal questions in reference thereto, now pending before the Department. You are therefore advised as follows:

Your recommendation of November 8 is hereby approved to the extent that \$1,000,000, or so much thereof as may be necessary, is hereby set aside from the Reclamation Fund for this project, and you are authorized to proceed with it with a view to the early construction thereof, provided, however, that this action is based upon and is subject to the following conditions:

First: That a satisfactory agreement or agreements be obtained from the owners of private property for the acquisition of such properties as may be necessary or required for the proper construction of the project, and that no part of the moneys hereby appropriated shall be expended for construction purposes or for the acquisition of any canals, laterals or other properties until such satisfactory agreement or agreements have been obtained and approved by the Secretary of the Interior.

Second: That a sufficient acreage of land under the project be pledged to secure the return to the Reclamation Fund of the moneys hereby appropriated therefrom.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

DEPARTMENT OF THE INTERIOR,
UNITED STATES RECLAMATION SERVICE,
Hermiston, Oregon, February 23, 1923.

From: Board of Engineers and Legal Advisor.
To: The Director, Washington, D. C.
Subject: Report on allotment of storage capacity and plan for
refund of Construction Cost—McKay Reservoir—
Umatilla Project.

1. The undersigned Board met at Hermiston, Oregon, on February 20th to 23rd, for the purpose of considering plans for the allotment of the storage capacity of the proposed McKay Reservoir to lands available and needing full or supplemental water supply for reclamation and the form of guarantee to be required for repayment of the construction cost prior to beginning construction.

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13. *Recommendation.*

In view of the fact that the Westland Irrigation District is organized and ready to contract for over half of the capacity as set out in letter from the President of said District attached, and the land owners under the Furnish Canal are willing to organize an Irrigation District and contract for an additional 15,000 acre-feet, as set out in resolution of Board of Directors of the Furnish Ditch Company attached, It is recommended:

(a) That the District Counsel and Project Manager be instructed to prepare and submit a draft of contract for approval, to carry out the above provisions with each of the districts and

(b) With the various canal companies desiring to secure supplemental water as specified under (d);

(c) That upon approval thereof authority be granted to negotiate with said proposed contractors and secure the early execution thereof;

(d) Pending the execution thereof the acquisition by condemnation or otherwise of the lands required for the reservoir be pushed;

(e) That order be placed for the necessary plant and equipment, so that construction may not be delayed when the right of way is available and contracts properly executed with the Westland Irrigation District, it being understood that the land owners under the Furnish project will prosecute the organization of that district, with due diligence in order that such contract may be executed at the earliest possible date.

(Signed) F. E. WEYMOUTH
R. F. WALTER
HERBERT D. NEWELL
H. M. SCHILLING
H. L. HOLGATE

POSTAL TELEGRAPH

March 3, 1923.

RECLAMATION,
Denver, Colorado.

Recommendations of Board report, February 23, approved.

(Signed) A. P. DAVIS,
Director.

UNCOMPAHGRE PROJECT

COLORADO

The Uncompahgre project, originally called the Gunnison project, was authorized by the Secretary on March 14, 1903, under the Reclamation Act of 1902 (32 Stat. 388) ; examined and reported upon by a Board of Army Engineers and approved by the President on January 5, 1911, pursuant to the act of June 25, 1910 (36 Stat. 835). For the Director's recommendations see page 11 and for the Secretary's authorization see page 14.

The rehabilitation of the project and the construction of Taylor Park Dam ¹ were found feasible by the Secretary on November 1, 1935, and approved by the President on November 6, 1935, pursuant to section 4 of the act of June 25, 1910 (36 Stat. 836) and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702).

DEPARTMENT OF THE INTERIOR,
Washington, June 7, 1904.

THE DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: In a letter of the 20th ultimo to the Department, you referred to the authority given you in departmental letter of March 14, 1903, to proceed with the work looking to the construction of five projects under the act of June 17, 1902 (32 Stat. 388), one of them being that of the diversion of the water from Gunnison River to the Uncompahgre Valley, near Montrose, Colo.

You have stated that this project, which you have designated as the Uncompahgre Valley project, involves great engineering difficulties and careful dealing with vested land and water rights, and that the report of a board of engineers shows that the project is feasible and will cost upward of \$2,500,000, reclaiming about 100,000 acres, at a cost of \$25 per acre.

In order that the project may be undertaken in a systematic manner with a view to the organization of the interested landholders, the acquisition of water rights and concessions and the ultimate success of the project, you have recommended that the sum of \$2,500,000 be set aside conditionally for this project, and have made several other recommendations in the premises.

¹ The rehabilitation of the project and the construction of *Taylor Park Dam* was initiated by the National Industrial Recovery Act of 1933.

Your letter has been duly considered and in view of your several recommendations, I hereby set aside the sum of \$2,500,000 conditionally, from the fund provided by the act mentioned, and authorize you to take proper action to carry out the project, in its various details.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

OFFICE OF THE SECRETARY,
Washington, November 1, 1935.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The Supreme Court of the United States in the Parker Dam decision (United States v. State of Arizona, 295 U.S. 174) indicated that Section 4 of the Act of June 25, 1910 (36 Stat. 835) is applicable to irrigation projects constructed under the National Industrial Recovery Act, and this report upon the Uncompahgre Project, Colorado, is made to you under said statute of 1910 and under sub-section B of Section 4 of the Act of December 5, 1924 (43 Stat., 701).

Section 4 of the Act of June 25, 1910, provides, in effect, that after the date of that act no irrigation project to be constructed under the Act of June 17, 1902 (32 Stat., 388), and acts amendatory thereof or supplementary thereto shall be undertaken unless and until the Project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Sub-Section B, Section 4, Act of December 5, 1924 (43 Stat., 701), provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

Under date of December 7, 1933, the Federal Emergency Administrator of Public Works approved allotments of \$325,000, \$400,000, \$2,000,000 and on August 6, 1935, an allotment of \$500,000 respectively, for the rehabilitation of the South Canal and the making of general repairs and replacements to other portions of the irrigation system constituting the Uncompahgre Project, Colorado, constructed by the United States Bureau of Reclamation some years ago, the lining of the Gunnison Tunnel of

said Uncompahgre Project, the construction of the Taylor Park reservoir in connection with said project, and the construction of drainage works for the drainage of the lands of said project now water logged or in danger of becoming water logged. In further explanation of the allotment of \$500,000 for the construction of drainage work you are advised that it is in fact only a re-allotment of funds which will be saved from the allotment for the Taylor Park Reservoir and not required in its construction.

The supplemental waters to be developed by the construction of the Taylor Park Reservoir will be used for the irrigation of the lands of said Uncompahgre Project consisting of about 105,000 acres of irrigable lands which in most years need a supplemental supply during the latter part of the growing season.

The rehabilitation of the project irrigation system, the lining of the Gunnison Tunnel and the construction of the drainage works are for the purpose of putting the project in shape to repay the construction cost to the United States including expenditures made under the allotments above mentioned.

Studies and investigations made by the Bureau of Reclamation indicate that the water supply is adequate for the purpose intended, that the construction of the reservoir and drainage works, the lining of the Gunnison Tunnel, the rehabilitation of the South Canal and the making of general repairs and replacements to other portions of the project irrigation system are feasible from an engineering standpoint and that all of the work can be completed within the total of the allotments mentioned.

I find that the works are feasible, that the lands benefited thereby are adaptable for actual settlement and farm homes, that the lands are in need of the additional water supply which will be supplied, that the project will probably return the cost thereof to the United States, and that there is little probability in an established irrigation community such as this of the proposed construction work leading to an inflationary upward movement in land prices, which might prove detrimental to the project by bringing in new settlers who would be unable both to pay the inflated prices for their land and to meet their construction charges.

I recommend that the present project consisting of the construction of supplemental works, namely, the Taylor Park Reservoir, the rehabilitation of the South Canal, on which work has already been started, the lining of the Gunnison Tunnel and the drainage works, on which work has not yet started, be approved, that any steps or action heretofore taken toward the construction of the same be ratified and that authority be given to this Department to proceed with the work and to make contracts and to take any necessary action to construct and complete the works.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved November 6, 1935.

(Signed) FRANKLIN D. ROOSEVELT,
President.

VALE PROJECT

OREGON

The Vale project was found feasible by the Secretary on October 20, 1926, and approved by the President on October 21, 1926, under the provisions of section 4 of the act of June 25, 1910 (36 Stat. 836) and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702).

OFFICE OF THE SECRETARY,
Washington, October 20, 1926.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: Section 4 of the Act of June 25, 1910 (36 Stat., 835), provides in effect that after the date of that act no irrigation project to be constructed under the Act of June 17, 1902 (32 Stat., 388) and acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924 (43 Stat., 701), provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

The various features requiring investigation and report under this subsection will be discussed in connection with the Vale project in Oregon in the order in which there presented as follows:

WATER SUPPLY

Source.—Warmsprings Reservoir of the Warmsprings Irriga-

tion District on the Malheur River. The water and storage rights necessary for the development of the project would be purchased at cost from the Warmsprings Irrigation District. A portion of the purchase price for storage, \$150,000 to \$200,000, is to be expended in the construction of a drainage system for the Warmsprings Irrigation District. This district is at present in serious financial difficulties due, mostly, to the development of seepage which has not been remedied because of a lack of finances.

Shortages.—Past records indicate that with the storage now available shortages will occur in the drier years. Provision has been made in the contract for sufficient funds to provide additional storage by raising the Warmsprings Dam, should these shortages prove serious.

Storage capacity.—The Warmsprings Reservoir has a normal capacity of 170,000 acre-feet. By the installation of crest-control gates the reservoir surface may be raised 4 feet, thus providing additional capacity which may be utilized as hold-over storage. This would give a total reservoir capacity of 190,000 acre-feet.

ENGINEERING FEATURES

Storage.—Addition of crest-control gates to present dam at Warmsprings Reservoir.

Diversion.—A diversion weir about 12 feet high and 150 feet long will be required on the Malheur River. Location will be about one mile west of Namorf station on the Oregon Short Line (Ontario-Crane branch).

Main Canal.—Located on north side of river for one mile. Near Namorf station the canal crosses the river by a steel flume on a steel bridge. It then parallels the river for four miles and again crosses the river by a circular concrete siphon. At two intermediate points steel flumes would be required. On the remainder of the canal line within the canyon there would be 9,715 feet of concrete bench flume.

Power and pumping plants.—On the Harper division a pumping plant is planned to provide water for about 2,000 acres, power being secured by dropping water back to the river.

Drainage.—Bench lands have comparatively good natural drainage, with frequent water courses for removing waste water. Following irrigation a moderate amount of drainage will be needed.

COST OF CONSTRUCTION

COST BY FEATURES

Storage	\$690,000
Main Canal	2,500,000
Laterals	280,000
Drainage	120,000
Total	3,590,000

LAND PRICES AND PROBABLE COST OF DEVELOPMENT

The project lands have been appraised by a board of three members, one appointed by the Department, another by the District, and the third selected by these two. Their report, approved by me, establishes an average value of \$11 per acre for the irrigable land, without improvements. Land too high in elevation to be irrigated, or of uneven surface, was appraised as low as \$1.25 an acre. Contracts will be made with the landowners for sales to settlers at not to exceed these prices to prevent speculation. Nearly 40% of the project lands are owned by two companies.

About 15% of the lands are still held by the Government and would be allotted to selected settlers.

FINDING REGARDING FEASIBILITY OF PROJECT

The foregoing data justify the conclusion that the project is feasible from an engineering and economic standpoint, and I accordingly so find and declare.

ADAPTABILITY OF LAND TO SETTLEMENT AND FARM HOMES

The Vale project is based on the purchase of one-half the Warm-springs Reservoir. This enables 32,000 acres in the Warm-springs District to be reclaimed through drainage and will enable the 500 settlers who have farms in this district to resume their profitable cultivation. The stored water which is to be purchased is to be used to irrigate land in the vicinity of Harper and Vale, Oregon, by a canal diverting from the Malheur River about 10 miles above Harper and paralleling the Malheur River and Willow Creek to Jamieson, Oregon. It will supply water to 28,350 acres classed as susceptible of profitable cultivation under irrigation. About 2400 acres in the vicinity of Jamieson and 400 acres near Harper now receiving an inadequate water supply are included in the project. The average construction cost is about \$125 an acre.

The climate and soils of the project are adapted to the production of all temperate zone crops and fruits with yields equal to those obtained on the Boise project. The main crops that can be profitably grown under irrigation are: Alfalfa, the small grains, Indian corn, Red clover, potatoes, and many others of minor importance. Topography is generally excellent. A soil survey by the Bureau of Soils indicates deep and fertile soils over the greater part of the project. A detailed classification of the land on the basis of three classes of profitable productive land indicates one-half of all the land to be of the first class and the balance divided between second and third class. Branch lines of the Union Pacific Railroad are at a maximum distance of four miles from the irrigable land. The town of Vale, county seat of Malheur County, Oregon, especially will benefit by the construction of this project, and several smaller communities will grow and profit thereby.

The 28,350 acres requiring a full water supply is in its natural state adapted only to grazing stock and even then only for a short period in each year, due entirely to the low rainfall in that region. Dry farming has been tried but failed. With an ample water supply for irrigation this area will sustain a highly intensified agriculture and make homes for from 400 to 500 additional families. In addition to this it will rehabilitate the Warm Springs Irrigation District, having an irrigable area of about 32,000 acres, thus saving the investments already made by many American farmers therein.

PROBABLE RETURN TO RECLAMATION FUND OF COST OF CONSTRUCTION

The next declaration required is that the cost of construction will probably be returned to the reclamation fund. This is interpreted to mean that it will be returned within the period fixed in the contract with the Vale Oregon Irrigation District, which is in forty years from the time the public notice that the works are completed is issued by the Secretary.

The average construction cost is estimated at about \$125 an acre, making the yearly construction payment about \$3.10 an acre. The estimated yearly crop income is \$37.50 an acre. It would seem that this would enable construction and operating cost to be paid without hardships to the settlers.

Some of the causes of delinquencies in repayment which have occurred on existing projects will be averted on the Vale project. One is the injurious effect of land speculation, which will be prevented by requiring the large private land holdings to be subdivided and sold to settlers at a fair price. Provision will be made for giving the farmers practical advice in farm development and in working out a crop program. Settlers on the public lands of the Vale project will be selected, as provided in recent legislation. Such selection is destined to be an important factor in the development and solvency of future projects. It is recognized that the feasibility of reclamation depends on securing suitable settlers. This fundamental requirement for the success of Federal reclamation has been stressed by this Department during the past two years. It is a vital element in all calculations and forecasts.

Settlers will begin the farm development of this project under the following favorable conditions: Increase in agricultural production in the Nation is not keeping pace with increase in population. They will realize at the outset that their farms must be intensively cultivated and will be helped to organize for cooperation in production and marketing.

The favorable conditions heretofore recited and the newly established policy of the Bureau justify the belief that this project will return the cost thereof.

Because this is regarded as one of the projects best suited to the needs of settlers and appropriate for development under the reclamation law, I recommend its approval and the issuance of

the necessary authority to this Department to make contracts for its construction, and to proceed with the work.

Very truly yours,

(Signed) HUBERT WORK,
Secretary.

Approved October 21, 1926.

(Signed) CALVIN COOLIDGE,
President.

MALHEUR PROJECT

The Malheur project was authorized by the Secretary under the Reclamation Act of 1902 on May 11, 1904. It was later reclassified as a secondary project. The Board of Engineers report of October 27, 1905, on the project is combined with its report on the Umatilla and Owyhee projects, page 891. No construction was undertaken under this authorization.

UNITED STATES GEOLOGICAL SURVEY,
RECLAMATION SERVICE,
Pendleton, Oregon, March 25, 1904.

MR. F. H. NEWELL,
Chief Engineer, U. S. G. S., Washington, D. C.

SIR: We, the undersigned, have examined the surveys, plans and estimate exhibited by District Engineer, J. T. Whistler, relating to the Malheur Project. The project as now outlined contemplates storing the flood-waters of the Malheur River and its tributaries, and distributing them upon the adjacent lands.

So far as determined, the water supply and storage facilities combined, appear adequate for the 75,000 acres of land which can be covered. It also appears feasible to conduct the water from the storage reservoir down the open stream channel to the lower end of the canyon, and then divert on both sides of the River, covering thereby the available land.

Neither of the canal lines on this lower plan have been located, but so far as determined, the project appears feasible, and we have directed continuous and further investigations along the following lines:

First. Make plane table surveys comprising the probable location of the two main canals and the irrigable lands.

Second. Diamond drill borings at dam site and spillway.

Third. A reconnaissance of the Owyhee basin for storage facilities, as this basin, to a large extent, commands the same lands

as the Malheur and they, consequently, should be considered together.

We recommend that the Secretary of the Interior be requested to give his preliminary sanction to the Malheur Project, and to set aside \$2,000,000 for the construction thereof.

Respectfully submitted.

(Signed) A. P. DAVIS.
GEO. Y. WISNER.
H. N. SAVAGE.

UNITED STATES GEOLOGICAL SURVEY,
May 7, 1904.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: Surveys and examinations under the reclamation act have been conducted in Oregon and various localities under authority granted by you.

As a result of the examinations made along Malheur River it appears that 75,000 acres of irrigable land may be reclaimed at an estimated cost of less than \$30 per acre. The project has been examined by a board of engineers, consisting of Mr. A. P. Davis, George Y. Wisner, and H. N. Savage, and report has been made to the Chief Engineer. On the basis of this report, I respectfully recommend that the sum of \$2,000,000, or as much thereof as may be necessary, be set aside from the reclamation fund tentatively for the construction of the Malheur project, contingent upon a further detailed investigation yielding favorable results.

Very respectfully,

(Signed) CHAS. D. WALCOTT,
Director.

OFFICE OF THE SECRETARY,
Washington, May 11, 1904.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: In a letter of the 7th instant to the Department you referred to surveys and examinations made under the Act of June 17, 1902,—32 Stat. 388—and informed me that as a result of the examinations along Malheur River, Oregon, it appears that 75,000 acres of irrigable land may be reclaimed at an estimated cost of less than \$30 per acre.

You have accordingly recommended on the basis of reports by

a board of engineers, that the sum of \$2,000,000, or as much thereof as may be necessary, be set apart from the reclamation fund for the construction of the Malheur Project, contingent on a further detailed investigation yielding favorable results.

In compliance with your recommendation I hereby set aside the sum of \$2,000,000, or as much thereof as may be required, for the construction of the Malheur Project, from the fund provided by the Act mentioned.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

UNITED STATES GEOLOGICAL SURVEY,
FEBRUARY 3, 1906.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: In accordance with your request for a recommendation in relation to the Malheur Project in the State of Oregon, I have to report as follows:

There are now several obstacles to the development of a project from the Malheur River along the lines heretofore presented for your consideration. The principal among them are: failure to arrive at satisfactory agreement with the parties owning the lands which were granted on account of the Willamette and Cascade Mountain Military road, known as the Road Lands Company; interference of right of way granted to the Corvallis and Eastern Railroad Company, with reservoir construction; complex condition of private canals which must be included in the project; and the doubt in the minds of the settlers themselves as to their ability to pay the necessary charges for the project.

Most of these conditions are not likely to be removed in the near future and it is therefore recommended that no active work be done for the present on this project and that it be allowed to remain in status quo with the intention to utilize for the Klamath Project the \$1,000,000 allotment made in the past for the construction of the Malheur Project.

A small project has been worked out comprising a section of the main Malheur Project involving about 18,000 acres and estimated to cost about \$700,000. This is practically free from all the obstacles pertaining to the larger project. It also contains the best portion of the land, practically all the public land in the main project, and very little, if any road land.

It is recommended that this small project be kept in view for future construction when funds shall become available therefor.

Very respectfully,

(Signed) CHAS. D. WALCOTT,
Director.

OFFICE OF THE SECRETARY,
Washington, February 10, 1906.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: Referring to your letter of the 3rd instant relative to the Malheur Project, Oregon, in which for reasons set forth you recommend that no active work be done for the present on this project and that it be allowed to remain in status quo with the intention to utilize for the Klamath Project the \$1,000,000 allotment made in the past for the construction of the Malheur Project, and in which you state that a small project comprising a section of the main Malheur Project has been worked out, which is practically free from all the obstacles in the way of the development of the larger project, and recommend further that this small project be kept in view for future action when funds shall become available, you are advised that after consideration of the matter your recommendations are approved and you are directed to take such action in the premises as may be necessary to carry the same into effect.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

VALLEY GRAVITY PROJECT

TEXAS

The Valley Gravity project, originally called the Valley Gravity Canal and Storage project, was authorized by the act of June 28, 1941 (55 Stat. 303, 338). However, construction of the project has not been undertaken.

INTERIOR DEPARTMENT APPROPRIATION ACT OF 1942

[Extracts from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1942, and for other purposes. (Act of June 28, 1941, 55 Stat. 303 and 338-339, Public Law 136, 77th Cong., 1st sess.)

* * * That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, for the Department of the Interior for the fiscal year ending June 30, 1942, namely:

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Valley Gravity Canal and Storage Project, Texas: For the completion of investigations and commencement of construction of the Valley Gravity Canal and Storage Project, Texas, in substantial compliance with the engineering plan described in a report dated February 3, 1940, entitled "Report of Conference of Engineers to the American Commissioner, International Boundary Commission, United States and Mexico, on the Valley Gravity Canal and Storage Project (Federal Project Numbered 5)" and report appended thereto, \$2,500,000, to be immediately available and to remain available until expended: *Provided*, That said sum shall be available to the President for allocation in accordance with the act entitled "An act to amend the act of May 13, 1924, entitled 'An act providing for a study regarding the equitable use of the waters of the Rio Grande', and so forth, as amended by the public resolution of March 3, 1927," approved August 19, 1935: *Provided further*, That from said sum expenditures may be made for personal services in the District of Columbia (not exceeding \$15,000), and in the field, for the pay-

ment of fees for professional services, including experts, engineers, and attorneys, and for all other objects of expenditure as specified for projects hereinbefore in this act under the caption "Bureau of Reclamation," under the headings "Salaries and expenses" and "Administrative provisions and limitations," but without regard to the amounts of the limitations therein set forth: *Provided further*, That of said sum \$250,000 shall, upon approval by the President of an allocation therefor, be available to the Secretary of State (acting through the American Commissioner of the International Boundary Commission, United States and Mexico) for continuing the investigations authorized by such act of August 19, 1935: *Provided further*, That the Secretary of State, with the approval of the President, shall designate the features of the project which he deems international in character, and shall direct such changes in the general project plan as he deems advisable with respect to such features; and the features so designated shall be built, after consultation with the Bureau of Reclamation as to general design, by the American section of the International Boundary Commission, United States and Mexico, and shall be operated and maintained by said Commission insofar as their operation and maintenance in such manner is, in the opinion of the Secretary of State, necessary because of their international character. The construction, operation, and maintenance of such project shall be pursuant to the Federal Reclamation laws, except as hereinbefore provided and except that—

(1) In addition to the nonreimbursable allocation to flood control or navigation which may be made by the Secretary of the Interior under Section nine (b) of the Reclamation Project Act of 1939, the President, after consultation with the Secretary of State and the Secretary of the Interior, shall allocate such part of the total estimated cost of the project as he deems proper to the protection of American interests from drought hazards resulting from the uncontrolled and unregulated flow of the international portion of the Rio Grande below Old Fort Quitman, Texas. Provisions of law applicable with respect to allocations to flood control under Section nine (b) of the Reclamation Project Act of 1939 shall, insofar as they are not inconsistent with the foregoing provisions, be applicable in like manner with respect to any allocation made under this subparagraph; and

(2) All revenues received by the United States in connection with the construction, operation, and maintenance of such projects shall be covered into the Treasury as miscellaneous receipts.

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VENTURA RIVER PROJECT

CALIFORNIA

The Ventura River Project was approved by the Secretary of the Interior on June 14, 1955, and authorized by Act of Congress on March 1, 1956 (70 Stat. 32, Public Law 423, 84th Cong., 2d sess.)

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington, D. C., February 18, 1955.

The SECRETARY OF THE INTERIOR.

SIR: This is my proposed report on the Ventura River project, California. It is based on and includes the accompanying report of the regional director, Sacramento, Calif.

The Ventura project area, which encompasses the city of Ventura, is on California's southern coast, in Ventura County, about 60 miles northwest of metropolitan Los Angeles. This area is composed of the mountains of the Coast Range and the valley of the Ventura River and its tributaries. Included also is a relatively long, narrow strip of land extending along the coast west of the city of Ventura.

This is a multiple-purpose project involving primarily the storage of water from Ventura River and Coyote Creek in the proposed Casitas Reservoir for irrigation and municipal and industrial water. In addition, there will be important fish and wildlife and recreational benefits as well as incidental flood-control benefits, achievement of which is considered a project purpose.

There has been a rapid expansion of population in the project area. People are attracted to this area by its agricultural, industrial, and commercial opportunities and by its excellent climatic and scenic characteristics. However, rainfall is deficient during the growing season. Runoff of streams is erratic and the area is subjected to prolonged droughts. There is an urgent need for stream regulation to provide additional water to stabilize the present economy, to irrigate new lands, to supply new industries, and in general to provide for a rapidly expanding economy.

Many of the lands currently irrigated experience serious shortages of water. The city of Ventura has outgrown a reliable water supply and is now frequently forced to pump water from three wells located along the ocean front which are subject to salt-water intrusion. The proposed project would greatly aid the general situation by providing an addition to the area's water supply of 27,800 acre-feet annually, including 800 acre-feet to be obtained from the existing Matilija Reservoir. It is estimated this supply will be adequate to supply area needs during the 50 years following initial operation of the project.

During the first 50-year period it is estimated that 60 percent of the total water made available would be used for irrigation and 40 percent for municipal and industrial purposes. At the end of the first 20-year period of project operation it is estimated that maximum irrigation development will have been reached and 15,000 acre-feet will be needed at that time for that purpose. At the same time 5,000 acre-feet would be utilized for municipal and industrial purposes. Urban and industrial water use would continue to increase and use for irrigation would gradually decrease until at the end of a 50-year period 15,600 acre-feet would be used for municipal and industrial purposes and 12,400 acre-feet for irrigation. Project lands consist of about 20,200 acres. Under full development it is estimated that 12,600 acres would be irrigated and 7,600 acres would be utilized for municipal and industrial development. Under present conditions about 4,000 acres are irrigated; approximately 5,900 acres are developed for urban and industrial uses; and over 10,300 acres are used for grazing, are dry-farmed, or are idle.

The people to be benefited by the project are represented by the Ventura River Municipal Water District which covers the project area. They recognize the importance of this project to their welfare and have cooperated wholeheartedly during the investigation period. Local interests contributed one-half of the funds required for the project investigation and preparation of the planning report. They also have entered into a contract with the Federal Government to furnish funds for advance planning for the project. Total funds, to be advanced for both preliminary and advanced planning purposes amount to \$778,000. In addition to having strong local support, the project is economically justified from the national viewpoint with a ratio of direct benefits to cost of 1.76 to 1 and a ratio of total benefits to cost of 4.25 to 1. For these ratios, the benefits for an acre-foot of municipal and industrial water were assumed equal to the benefits for an equivalent amount of irrigation water. Even if municipal and industrial water benefits are said to be measured by the cost of the cheapest alternative method of providing an equivalent municipal and industrial water supply the total project benefits would be well in excess of project costs with a benefit-cost ratio for municipal and industrial water of about 1.4 to 1.0 and a ratio of direct irrigation benefits to costs of 1.56 to 1.

The project facilities that would be constructed by the Federal Government are Casitas Dam and Reservoir on Coyote Creek, a

tributary to the Ventura River; Robles diversion dam on the Ventura River; Robles-Casitas Canal; and the main conduit system consisting of 33 miles of pipelines, 7 pumping plants, and 6 balancing reservoirs. The Robles diversion dam would divert surplus flows through the Robles-Casitas Canal for storage and regulation in the Casitas Reservoir. Water would be released as required from the reservoir into the main conduit system for delivery to distribution systems. Some of the distribution facilities are existing; others needed would be constructed by the water users and would not be financed by Federal funds. Operation of the existing Matilija Reservoir located upstream on the Ventura River would be coordinated with operation of Casitas Reservoir.

The cost of the Ventura River project based on January 1954 prices, which are approximately the same as current prices, is estimated to be \$27,669,000, including \$169,000 for minimum recreation facilities as estimated by the National Park Service. The \$169,000 figure includes \$67,500 for the acquisition of 675 acres of land required for minimum basic facilities in addition to land otherwise to be acquired for project purposes. Provision for minimum recreation facilities is not included in the regional director's recommendations, but recognizing the need for such facilities, I recommend that they be included in the project on a nonreimbursable basis provided that a local agency will assume the responsibility for operation and maintenance of the recreation facilities and provided, further, that the additional lands acquired shall be sold at cost to the State or one of its political sub-divisions within 15 years of their acquisition. Such lands not sold shall, at the expiration of the 15-year period, be sold on the open market, or at fair market value, with preference being given to the State or local government.

The \$27,669,000 project construction costs tentatively are allocated to municipal and industrial water, to irrigation and to recreation in the amounts of \$11,403,000, \$15,319,000 and \$169,000, respectively. The balance of \$778,000 is not a Federal cost as it is being contributed by the Ventura River Municipal Water District. Studies indicate that project revenues from the sale of irrigation and municipal and industrial water together with receipts from an ad valorem tax levy in the project area will repay the municipal and industrial water allocation at 2½ percent interest in 40 years and the irrigation allocation in 50 years including a 10-year development period.

Present plans provide for no expenditure for fish and wildlife facilities although a valuable fishery may be anticipated in Casitas Reservoir. It is recommended, therefore, that additional detailed studies of fish and wildlife resources affected by the project be conducted as necessary, after project authorization, in accordance with section 2 of the act of August 14, 1946 (60 Stat. 1080), and that such reasonable modifications in the authorized project facilities, including the screening of the outlet works at Casitas Reservoir in a manner satisfactory to the California Department of Fish and Game and the possible future installation of fish-passage facilities at the Robles diversion dam, be made by the Secretary

of the Interior as he may find appropriate to preserve and propagate these resources. It is recommended, further, that Federal lands for project purposes and project waters in the project area be open to use for hunting and fishing so long as title to the lands and structures remains in the Federal Government, except for sections reserved for safety, efficient operation, or protection of public property, and that leases of Federal lands for project purposes in the project area reserve the right of public access for hunting and fishing. It is contemplated that the funds expended for fish and wildlife purposes would be in addition to those reported above and would be nonreimbursable in accord with the act of August 14, 1946.

Based on the contemplated development, full use of the water that would be made available by construction of the recommended project would not be realized for a number of years after completion of the project works. As a result, the possibility of initial construction of a smaller dam and reservoir with provision for future enlargement as water needs increased was investigated. After careful consideration of the technical and economic factors involved, it was concluded that initial construction of a reservoir of 250,000 acre-feet capacity is the most desirable plan. Other considerations such as the more rapid growth of the project area than contemplated, the probable extension of the service area boundaries, the probable future urban and suburban expansion into non-irrigable foothill areas, which areas have not been considered in the studies for future water requirements, and possible heavier industrial demands than estimated all tend to support the decision to construct initially to the 250,000 acre-foot capacity.

In addition to my recommendations made herein concerning minimum recreation facilities and provision for preservation and propagation of fish and wildlife, I concur in and adopt the recommendations of the regional director as set forth in paragraph 39 of his report.

I recommend that you approve and adopt this report as your proposed report on the Ventura River project and that you authorize me in your behalf to transmit copies to the State of California and to the Secretary of the Army, in accordance with requirements of the Flood Control Act of 1944 (58 Stat. 887), to the State of California for the views and recommendations of the head of the agency exercising administration over the wildlife resources of that State, in accordance with provisions of the act of August 14, 1946 (60 Stat. 1080), and to other interested Federal agencies for comments.

Respectfully,

(Signed) W. A. DEXHEIMER,
Commissioner.

Approved and adopted: March 11, 1955.

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington, D. C., June 2, 1955.

The SECRETARY OF THE INTERIOR.

SIR: This is my report on the Ventura River project, California. It is based on and includes the proposed report on this project which you approved and adopted on March 11, 1955.

Copies of your proposed report were transmitted to the State of California and to the Secretary of the Army in accordance with provisions of section 1 (c) of the Flood Control Act of 1944 (58 Stat. 887) and to the State of California for comments of the head of the agency exercising administration over the wildlife resources of that State in accordance with provisions of the act of August 14, 1946 (60 Stat. 1080). Copies of the report were sent also to the agencies represented on the Inter-Agency Committee on Water Resources for comments. Comments have been received from the State of California and the Departments of the Army, Agriculture, and Health, Education, and Welfare, and copies are attached. If and when additional comments are received they will be sent to you immediately for transmission to the President and the Congress.

In view of the generally favorable nature of the comments received it does not appear that revision of your proposed report is necessary. In particular the officials of the State of California concurred in the recommendation that the project be authorized. They further recommended that construction be initiated at the earliest possible date.

The Department of Agriculture expressed some reservation as to the feasibility of irrigation development based on a water charge of \$25 per acre-foot. An identical charge is provided for the adjacent Cachuma project which is now nearing completion of construction by the Bureau of Reclamation and there are no indications that difficulty will be encountered in meeting this charge, in fact all available water is presently under contract at the \$25 figure.

Accordingly, I recommend that you approve and adopt this report as your report on the Ventura River project and that you transmit it together with the attached comments to the President and subsequently to the Congress in accordance with the provisions of the Reclamation Project Act of 1939.

Respectfully,

(Signed) E. G. NIELSEN,
Acting Commissioner.

Approved and adopted: June 14, 1955.

(Signed) CLARENCE A. DAVIS,
Acting Secretary of the Interior.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D. C., June 14, 1955.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: My report on the Ventura River project, California, is transmitted herewith, pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

The physical works recommended for authorization and construction consist of Casitas Dam and Reservoir on Coyote Creek; Robles diversion dam on the Ventura River; Robles-Casitas Canal to carry surplus flows of Ventura River water from the diversion dam for regulation in Casitas Reservoir; and the main conduit system consisting of 33 miles of pipelines, 7 pumping plants, and 6 balancing reservoirs. Regulation and distribution would provide much needed additional water supplies for irrigation and municipal and industrial purposes to sustain the present economy and to create new economic opportunities in Ventura County.

The estimated cost of the project based on January 1954 prices is \$27,669,000 which includes \$169,000 for minimum recreational facilities. The prospective water users have advanced or signed contracts to provide \$778,000 of this total for planning purposes. Our studies indicate that, of the remaining costs, \$11,403,000 allocated to municipal and industrial water would be repaid in 40 years at 2½ percent interest and \$15,319,000 allocated to irrigation would be repaid in 50 years, including a 10-year development period. The \$169,000 for minimum recreational facilities would be nonreimbursable.

The ratio of estimated benefits to estimated costs, based on a 50-year period of analysis, is 1.76 to 1 for direct benefits and 4.25 to 1 for total benefits. In addition to this firm economic justification local interests have demonstrated strong support for the development.

The report has been transmitted to officials of the State of California and to the Secretary of the Army for their consideration and recommendations as required by the provisions of section 1 (c) of the Flood Control Act of 1944 (53 Stat. 887). It was also sent to the State of California for the comments of the head of the agency exercising administration over the wildlife resources of that State as required by the provisions of the act of August 14, 1946 (60 Stat. 1080) and to the Departments of Agriculture, Commerce, Labor, and Health, Education, and Welfare, and the Federal Power Commission in accordance with inter-agency agreements. Comments have been received from the State of California, and Departments of the Army, Agriculture, and Health. Educa-

tion, and Welfare and copies are enclosed with the report. If and when additional comments are received they will be transmitted to you and ultimately to the Congress.

Your advice concerning the relationship of the Ventura River project to your program will be appreciated in order that the report may be transmitted to the Congress for its consideration and appropriate action in accordance with the provisions of the Reclamation Project Act of 1939.

Sincerely yours,

(Signed) CLARENCE A. DAVIS,
Acting Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington 25, D. C., June 29, 1955.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This will acknowledge receipt of Acting Secretary Davis' letter of June 14, 1955, requesting advice concerning the relationship to the program of the President of your proposed report on the Ventura River project, California.

The report recommends a multiple-purpose project involving the storage of water primarily for irrigation and municipal and industrial uses. The estimated total cost, based on January 1954 prices, is \$27,669,000, of which \$26,891,000 is Federal and \$778,000 is non-Federal. The report states that \$26,722,000 of the Federal cost, consisting of \$15,319,000 for irrigation and \$11,403,000 for municipal and industrial supply purposes, is reimbursable, and \$169,000 for recreational facilities is nonreimbursable. The non-Federal cost consists of a contribution of \$778,000 by the Ventura River Municipal Water District formed in October 1952.

The average annual total benefits are \$4,374,000, of which \$1,809,000 are primary and \$2,565,000 are secondary. The annual cost is estimated at \$1,028,000. The overall project benefit-cost ratios are 4.25 based on total benefits and 1.76 based on primary benefits. Corresponding benefit-cost ratios for irrigation are 3.90 and 1.56, respectively, and for municipal and industrial water are 4.44 and 1.71, respectively.

The report indicates that project revenues from the sale of irrigation and municipal and industrial water, together with receipts from an ad valorem tax levy on the district's assessed valuation, presently estimated to be \$185 million, will repay the municipal and industrial water allocation at 2.5 percent interest in 40 years and the irrigation allocation in 50 years including a 10 year development period.

It is noted that definite contractual arrangements for repayment of reimbursable costs have not been completed but that the

Ventura River Municipal Water District, representing the project water users, contemplates repayment of these costs by a combination of water tolls and tax assessments. The water users would repay \$3,227,000 for irrigation and \$11,243,500 for municipal and industrial water or a total of \$14,470,500. The balance, including interest on the municipal and industrial water investment, of \$19,403,113 would be repaid through a general tax levy which would involve a maximum annual rate of approximately \$0.30 per \$100 of assessed valuation.

The report recommends that a study be made of fish and wildlife resources after project authorization and that such modification in the authorized project facilities as may be found appropriate to preserve and propagate these resources be made by the Secretary of the Interior. The Department contemplates that any additional costs for this purpose would be nonreimbursable.

The Department of Agriculture questions whether farmers will make necessary investments to expand irrigation to the full project potential in view of annual water charges of \$25 per acre-foot or an average of more than \$50 per acre annually. The State of California is in agreement with the objectives of the project.

The Bureau of the Budget believes that:

(1) In view of the possibilities that irrigation may not expand to the extent anticipated in the report, and in order to protect the Federal investment, construction of the project, if authorized, should be contingent upon the Ventura River Municipal Water District assuming financial responsibility for the project and executing a repayment contract with the Federal Government for the repayment of all reimbursable costs within a period of 50 years.

(2) Where proposed recreational facilities are not of national significance, as in the case of the Ventura River project, they should not be included in the project report unless States and local governments agree to repay the costs. However, such minimum basic facilities and services, as may be needed for the general protection and operation of the project area and for the accommodation or protection of the visiting public, should be considered necessary adjuncts to construction and operation, and their costs should be allocated to the major purposes of the project.

(3) With respect to fish and wildlife, the costs for correcting any damages to fish and wildlife caused by the project should be treated as part of the construction costs and allocated to the various purposes in the same manner as other damages, including relocations. To the extent that works to be constructed would be in the nature of an expansion of the fish and wildlife resources of the area they would fall into either of two classes. On those of a purely local nature the cost should be fully reimbursed by States, local governments, or local interests. If of national significance they should be authorized and financed as a part of the regular fish and wildlife program or authorizing language should be submitted to the Congress stating the maximum amount of such costs which would be borne by the Federal Government.

Your proposed report presents a very beneficial water resource project for the Ventura River Basin. The benefit-cost ratios based only on their direct benefits are favorable for both the irrigation and the municipal and industrial water features. Also, the analysis given in your report shows the project to be sound financially with full repayment of the Federal reimbursable investments scheduled within a period of 50 years, including a 10-year development period for irrigation.

Accordingly, you are advised that, (1) subject to your consideration of the above comments there would be no objection to the submission of your report to the Congress, and (2) we would recommend that any legislation authorizing the proposed project incorporate the conditions set forth above concerning the financial responsibility for repayment of all reimbursable costs within a period of 50 years, and the provision of recreational and fish and wildlife facilities. No commitment, however, can be made at this time as to when any estimate of appropriation would be submitted for construction of the project, if authorized by the Congress, since this would be governed by the President's budgetary objectives as determined by the then prevailing fiscal situation.

We would appreciate having a copy of this letter included with your report when it is submitted to the Congress.

Sincerely yours,

(Signed) DONALD R. BELCHER,
Assistant Director.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., July 12, 1955.

Hon. SAM RAYBURN,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: My report on the Ventura project, California, is transmitted herewith pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

The report presents a plan for furnishing an average of 27,800 acre-feet of water annually for irrigation and for municipal and industrial purposes in Ventura County in the vicinity of the city of Ventura. The project works would consist primarily of Casitas Dam and Reservoir, Robles diversion dam, Robles-Casitas Canal, and a main conduit system for carrying the water to the various service areas. This project is urgently needed to permit expansion of irrigation and industry and to serve the municipal requirements of this rapidly growing, water-scarce area.

The estimated cost based on January 1954 prices, which are approximately the same as current prices, is \$27,669,000. A total

of \$778,000 will have been contributed by the water users prior to construction of the project, if authorized, for investigations and for preconstruction activities. The remainder, except for \$169,000 which could be assigned to minimum basic recreational facilities is allocated to irrigation and to municipal and industrial water supply and will be repaid within a 50-year period including a 10-year development period. As is customary, repayment of costs allocated to municipal and industrial water purposes would include interest. Total benefits are estimated to exceed costs in the ratio of 4.25 to 1 with primary benefits exceeding costs by a margin of 1.76 to 1.

Copies of the proposed report of the Secretary of the Interior were transmitted to the State of California and to the Secretary of the Army for their views and recommendations in accordance with the provisions of section 1 of the Flood Control Act of December 22, 1944, and to the agencies represented on the Inter-agency Committee on Water Resources for their information and comments. Copies of all comments which have been received are enclosed with the report.

The report and copies of all comments received were transmitted to the President. Enclosed is a copy of the letter of comments of June 29, 1955, from Assistant Director, Bureau of the Budget, Donald R. Belcher.

Sincerely yours,

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

An act to authorize the Secretary of the Interior to construct, operate, and maintain the Ventura River reclamation project, California. (Act of March 1, 1956, 70 Stat. 32, Public Law 423, 84th Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the purpose of supplying water for the irrigation of lands in Ventura County, California, and for municipal, domestic, and industrial use therein, and for other incidental beneficial purposes, the Secretary of the Interior is authorized to construct, operate, and maintain the Ventura River reclamation project comprising, as its principal works, Casitas Dam and Reservoir on Coyote Creek, Robles diversion dam on Ventura River, a canal to carry water from the Robles diversion dam to Casitas Reservoir, and other conduits and related facilities to deliver water to the lands and area to be served by the project.

SEC. 2. (a) In constructing, operating, and maintaining the Ventura River project, the Secretary shall be governed by the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto) except as is otherwise provided in this Act.

(b) In furnishing water for irrigation and for municipal, domestic, and industrial uses from the Ventura River project the Secretary shall charge rates with the object of returning to the United States during a fifty-year payment period (including any

development period) all of the costs incurred by it in constructing, operating, and maintaining the project which the Secretary finds to be properly allocable to the purposes aforesaid and of interest, as hereinafter provided, on the portion of the construction cost which is allocated to municipal, domestic, and industrial water.

(c) Any contract entered into under section 9, subsection (d), of the Reclamation Project Act of 1939 (53 Stat. 1187, 1193, 43 U. S. C., sec. 485 (h)), for payment of those portions of the costs of constructing, operating, and maintaining the Ventura River project which are allocated to irrigation and assigned to be paid by the contracting organization may provide for the repayment of the portion of the construction cost of the project assigned to any project contract unit or, if the contract unit be divided into two or more irrigation blocks, to any such block over a period of not more than fifty years or as near thereto as is consistent with the adoption and operation of a variable payment formula which, being based on full repayment within the period stated under normal conditions, permits variance in the required annual payments in the light of economic factors pertinent to the ability of the organization to pay.

(d) Notwithstanding any other provision of law to the contrary, all net revenues derived by the Secretary from the furnishing of water for municipal, domestic, and industrial use shall be applied first to the amortization of that portion of the cost of constructing the Ventura River project which is allocated to that purpose with interest on the unamortized balance thereof at the average rate (which rate shall be certified by the Secretary of the Treasury) paid by the United States on its marketable long-term securities outstanding on the date of this Act and thereafter to the amortization of that portion of the cost of constructing the project which is allocated to irrigation but which is beyond the ability of the irrigation water users or their contracting organization to repay as provided above.

(e) The Secretary is authorized, subject to such rules and regulations as he may prescribe, to turn over to any contracting organization or to an organization which is designated by it for that purpose and which is satisfactory to the Secretary the care, operation, and maintenance of such portions of the Ventura River project as are used solely or principally for the benefit of that organization.

(f) Minimum basic facilities may be provided for the accommodation of the visiting public at Casitas Dam and, if responsible local interests agree to assume the operation and maintenance thereof, at the project reservoirs. The costs of such facilities shall be non-reimbursable.

SEC. 3. There is hereby authorized to be appropriated for construction of the Ventura River project the sum of \$27,600,000 plus such amounts, if any, as may be required by reason of changes in construction costs as may be indicated by engineering cost indices applicable to the types of construction involved herein and, in addition thereto, such sums as may be required to operate and maintain the project.

VERMEJO PROJECT

NEW MEXICO

The Vermejo project was found feasible by the Secretary on April 1, 1949, and was authorized by the act of September 27, 1950 (64 Stat. 1072).

BUREAU OF RECLAMATION,
Washington 25, D. C., April 1, 1949.

THE SECRETARY OF THE INTERIOR.

SIR: A plan for the rehabilitation and improvement of existing works for the on-project storage, diversion and distribution of water for irrigation of the lands now comprised in and served by the Maxwell Irrigation Co. is presented in this report which is based on the accompanying report of the regional director, Amarillo, Tex., dated February 1949, and entitled "Plan for Rehabilitation Vermejo Project, Canadian River Basin, New Mexico." The Vermejo project is located in Colfax County, New Mex., near the village of Maxwell. It is in the northeastern part of the State, about 27 miles south of Raton.

Irrigation, essential for successful farming in this semi-arid area, was first initiated in 1888. The works of the Maxwell Irrigation Co., were constructed to serve some 24,000 acres of land. Application of water for beneficial use has been effected, from time to time, on a total of some 15,300 acres of lands owned by shareholders in the Maxwell Irrigation Co., which is the present operating organization in the area. Loss of storage capacity, however, due to sedimentation of reservoirs and damage to impounding structures; deterioration of canals and laterals of the distribution system; and obsolescence or poor condition of control structures have progressed to the point that, in recent years, the area which can be provided with a full water supply is progressively decreasing. A land-use survey made in 1947 showed a net cultivated area of 10,500 acres, of which only 3,500 acres were in irrigated crops. A detailed land classification shows some 12,780 acres of land in the district to be capable of sustained production under irrigation.

For 60 years the irrigators have struggled with the difficult task of enlarging reservoirs to replace storage capacity lost by sediment encroachment and to repair facilities damaged by floods. The latest of these devastating floods occurred in 1941 and 1942, washing out the Hebron Dam. Because of these conditions, the lands under development have been in excess of those which could be assured a full water supply and the project has undergone repeated financial reorganization. In 1945, there were 86 land ownerships and 45 farm operators in the district. Sixty percent of the farm operators have depended on work off the farm or on income from other business to supply operating capital and the family living.

The plan for the potential Vermejo project is designed to improve and stabilize the economy of the area and improve the utilization of the water and land resources, thereby assuring continued existence of the project area as a social and economic unit which is extremely important to the State and the Nation.

Rehabilitation of the project would be accomplished through stabilizing the irrigable area at about 7,200 acres by provision of an adequate water supply, an efficient distribution system, and adequate drainage. Development of important fish and wildlife resources would be included, together with the related recreational resources. Sediment and flood control would be provided. There are large areas of good lands and only classes 1 and 2 lands will be included in the project. Supplemental storage, adequate for the lands to be irrigated, would be provided. The regional director's report provides for flood control capacity in the Stubblefield Arroyo detention reservoir. It is considered desirable that the capacity of this reservoir be increased to about 2,800 acre-feet to accommodate an inflow flood volume in excess of that provided in his report, thereby providing ample capacity in the reservoirs to accommodate sediment accumulation for a period of at least 85 years without encroachment on the capacity required to regulate water for a project area of 7,200 acres, and to regulate the flood inflow into the reservoirs. After this time there will be a gradual encroachment on this storage space by sediments. However, the Eastern Colfax County Soil Conservation District is assisting ranchers to improve vegetative conditions on watersheds tributary to the storage reservoirs and as these improvements expand they will cause a reduction in present sedimentation rates which will lengthen the life of the rehabilitated reservoirs.

There are a number of items in the plan for rehabilitating the irrigation system which are readily constructable by the district with available personnel and equipment in conjunction with normal maintenance activities. The irrigation company officials have agreed to levy assessments in the amounts of \$32,000 per year, of which an average of \$13,000 per year will be used to carry on deferred maintenance work during the 10-year construction and amount to pay for operation and maintenance and discharge the development period. There will remain \$19,000 which is an adequate amount to pay for operation and maintenance and discharge the present obligations of the company during the 10-year period.

The plan involves the acquisition of about 5,200 acres of land and water in the low-lying portion of the project for wildlife development and management purposes. A system of regulated ponds would be provided for wildlife and waterfowl improvement. These facilities would provide a waterfowl resting and nesting area on a very important flyway. Several of the reservoirs would provide fishing and recreational areas which have considerable value. The plan provides for acquiring necessary rights-of-way and construction of recreational facilities.

The estimated cost of the features of the plan, as presented by the regional director's report, based on November 1948 prices, is \$2,932,000. This would be increased by about \$27,000, because of the enlargement of the Stubblefield Arroyo detention reservoir, to \$2,959,000. The tentative allocation of costs provides that \$718,590 be allocated to the conservation and propagation of fish and wildlife, \$134,880 to recreation and \$95,450 to flood control, all of which should properly be nonreimbursable. The balance of the cost, \$2,010,080, would be allocated to irrigation and would be repaid by the project water users.

On the basis of 1939 to 1944 farm prices, the analyses made by the regional director indicate that the water users would be able to meet annual water charges of \$6.30 per acre or a total of \$45,400 on the 7,200 acres of irrigable land in the project area. In addition to paying operation and maintenance charges, the water users would be able to repay the portion of the estimated construction costs allocable to irrigation over a period of 76 years. This period is considered to be well within the useful life of the project. The water users have expressed a willingness to make this repayment, and have urged immediate construction of the project.

In his analysis of the project, the regional director has considered also the benefits which would accrue to the region and to the Nation as a whole as a result of the proposed work. The benefits from the project include safeguarding the capital investment already made, as well as supporting the economy of the surrounding area and contributing to the expansion of commerce and industry. The measureable benefits that would result from the project are estimated at more than \$193,600 annually at 1939—44 average prices. In addition to the measurable benefits, numerous important intangible benefits not susceptible to evaluation in monetary terms would result from rehabilitation of the project. Annual cost of the project to the Nation would amount to \$109,700. Thus on the conservative basis of 1939—44 farm prices and 1948 construction costs, the benefit-cost ratio is 1.76 to 1.

I approve of the plan for rehabilitation and improvement of the Vermejo Project, New Mexico, presented in the attached report of the regional director and concur in his recommendations.

In order, however, to clarify several matters that may have been left in doubt by the report and its recommendations, I may add that it is my understanding and recommendation that (1) acquisition of lands, as recommended in the report, for fish and wildlife development and management purposes and for recreation be authorized and that such acquisition, together with construction

of project facilities used exclusively or predominantly for these purposes, shall, unless the Secretary determines otherwise, be accomplished by the Fish and Wildlife Service and by the National Park Service respectively; (2) that the costs to the Federal Government of these lands and facilities and the benefits expected to be derived from their use for these purposes shall be given appropriate weight in settling upon a final allocation of the costs of the project; (3) that, if the Secretary finds it proper to do so, he is authorized to enter into appropriate arrangements with State or local agencies for the construction, operation, maintenance, administration, and management of these lands and of the facilities serving these purposes; (4) that the project shall be operated and maintained primarily for irrigation and flood control and that other uses of its facilities shall be subordinate to these purposes; (5) that operation and maintenance costs of the project, as well as construction costs, which are properly attributable to flood control, fish and wildlife management, and recreation shall not be reimbursable, returnable, or payable in advance by the water users; (6) that, while it is expected that operation and maintenance of the irrigation facilities will be turned over to the water users, this will be done subject to the provisions of the reclamation laws; (7) that the Secretary shall be authorized to acquire, upon terms and conditions satisfactory to him, such assets of the Maxwell Irrigation Co., or any successor in interest as may be required or proper for carrying out the purposes of the project or for protecting the investment of the United States therein; and (8) that, except as is otherwise specified herein or in the recommendations of the regional director as clarified hereby, the project shall be constructed, operated, and maintained in accordance with the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and acts amendatory thereof or supplementary thereto).

Accordingly, I recommend that you adopt this as your proposed report and that you authorize me, in your behalf, to transmit copies of this report and the accompanying papers, including the regional director's report, to the States of New Mexico, Texas, and Oklahoma, and to the Secretary of the Army in accordance with requirements of the Flood Control Act of 1944 (58 Stat. 887). Upon fulfillment of the requirements of that act, copies of the report, together with any comments which are received, will be submitted for your transmittal to the President and subsequently to the Congress.

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved and adopted: April 1, 1949.

(Signed) OSCAR L. CHAPMAN,
Acting Secretary of the Interior.

AUTHORIZATION OF VERMEJO PROJECT

An act to authorize the construction, operation, and maintenance of the Vermejo reclamation project, New Mexico. (Act of September 27, 1950, 64 Stat. 1072, Public Law 848, 81st Cong., 2d sess.)

* * * That, for the purposes of irrigating approximately seven thousand two hundred acres of semi-arid lands in Colfax County, New Mexico, controlling floods, and providing for the preservation and propagation of fish and wildlife, as authorized by the Act of August 14, 1946 (60 Stat. 1080), the Secretary of the Interior, through the Bureau of Reclamation, is authorized to construct, operate, and maintain the Vermejo reclamation project, and, in so doing, to acquire lands and interests in lands, to rehabilitate, repair, and replace, to the extent necessary, existing works of the Maxwell Irrigation Company, and to acquire, upon terms and conditions satisfactory to him, such assets of said company or any successor in interest as may be required or proper for carrying out the purpose of the project or for protecting the investment of the United States therein.

SEC. 2. The Vermejo reclamation project shall, except as is otherwise provided, be governed by the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto): *Provided*, That, of the cost of constructing the project, \$2,010,080, or so much of said amount as is approved for allocation to irrigation, shall be repaid under a contract or contracts satisfactory to the Secretary, at the maximum rate which, in his judgment, is consistent with the repayment ability of the contracting organization and over such period of years as, in his judgment, is consistent with the maximum repayment ability of the contracting organization.

SEC. 3. Construction of the Vermejo reclamation project shall not be commenced until the President shall have approved a project report and there shall have been established, pursuant to the laws of the State of New Mexico, an organization with powers satisfactory to the Secretary, including the power to tax property, both real and personal, within its boundaries (which boundaries shall include the lands to be benefited by the project works) and the power to enter into a contract or contracts with the United States for payment or return, as the case may be, of the reimbursable costs of the project and such contract or contracts shall have been duly executed.

SEC. 4. The Secretary is authorized to enter into arrangements with appropriate Federal, State, or local agencies for the construction, operation, maintenance, administration, and management of the fish and wildlife facilities to be provided under the Vermejo reclamation project.

SEC. 5. There are hereby authorized to be appropriated such sums as may be required to carry out the purposes of this Act.

BUREAU OF RECLAMATION,
Washington 25, D. C., November 10, 1950.

THE SECRETARY OF THE INTERIOR.

SIR: Public Law 848, 81st Congress, Second Session, approved September 27, 1950, authorized construction, operation, and maintenance of the Vermejo Reclamation project by the Secretary of the Interior, acting through the Bureau of Reclamation. Section 3 of that act provided that construction of the Vermejo Reclamation project shall not be commenced until the President shall have approved a project report. This is my report for submission to the President for his approval. My report is based on, and modifies, the attached report of the regional director of the Bureau of Reclamation, Amarillo, Tex., dated February 1949 and entitled "Plan for Rehabilitation, Vermejo Project, Canadian River Basin, New Mexico."

The report presents a plan for the rehabilitation and improvement of existing works for the on-project storage, diversion, and distribution of water for irrigation of the lands now comprised in and served by the Maxwell Irrigation Co., located in Colfax County, N. Mex., near the village of Maxwell in the northeastern part of the State, about 27 miles south of Raton.

Irrigation, essential for successful farming in this semi-arid area, was first initiated in 1888. The works of the Maxwell Irrigation Co., were constructed to serve some 24,000 acres of land. Application of water for beneficial use has been effected, from time to time, on a total of some 15,300 acres of lands owned by shareholders in the Maxwell Irrigation Co., which is the present operating organization in the area. Because, however, of loss of storage capacity due to sedimentation of reservoirs and damage to impounding structures, deterioration of canals and laterals of the distribution system, and obsolescence or poor condition of control structures it has been possible, in recent years, to provide a full water supply only to a progressively decreasing area. A land use survey made in 1947 showed a net cultivated area of 10,500 acres, of which only 3,500 acres were in irrigated crops. Subsequently, the project works and water supply have deteriorated still further, to a point where immediate action is necessary to restore the economy of the area. A detailed land classification shows some 12,780 acres of land in the district to be capable of sustained production under irrigation.

For 60 years the irrigators have struggled with the difficult task of enlarging reservoirs to replace storage capacity lost by sediment encroachment and to repair facilities damaged by floods. The latest of these devastating floods occurred in 1941 and 1942, washing out the Hebron dam. Because of these conditions, the lands under development have been in excess of those which could be assured a full water supply and the project has undergone re-

peated financial reorganization. In 1945, there were 86 land ownerships and 45 farm operators in the district. Sixty percent of the farm operators have depended on work off the farm or an income from other business to supply operating capital and the family living.

The plan for the potential Vermejo project is designed to improve and stabilize the economy of the area and improve the utilization of the water and land resources, thereby assuring continued existence of the project area as a social and economic unit.

Rehabilitation of the project would be accomplished through stabilizing the irrigable area at about 7,200 acres by provision of an adequate water supply, an efficient distribution system, and adequate drainage. There are large areas of good lands and only classes 1 and 2 lands will be included in the project. Supplemental storage, adequate for the lands to be irrigated, would be provided. The project would also have substantial benefits to fish and wildlife resources. Flood control benefits would be provided by use of the reservoir capacity. The regional director's report provides for flood control capacity in the Stubblefield Arroyo detention reservoir. It is considered desirable that the capacity of this reservoir be increased to about 2800 acre-feet to accommodate an inflow flood volume in excess of that provided in his report, thereby providing ample capacity in the reservoirs to accommodate sediment accumulation for a period of at least 85 years without encroachment on the capacity required to regulate water for a project area of 7,200 acres, and to regulate the flood inflow into the reservoirs. After this time there will be a gradual encroachment on this storage space by sediment. However, the Eastern Colfax County Soil Conservation District is assisting ranchers to improve vegetative conditions on watersheds tributary to the storage reservoirs and as these improvements expand they will cause a reduction in present sedimentation rates which will lengthen the life of the rehabilitated reservoirs.

There are a number of items in the plan for rehabilitating the irrigation system which can readily be constructed by the district with available personnel and equipment in conjunction with normal maintenance activities. The irrigation company officials have agreed to levy assessments in the amount of \$32,000 per year, of which an average of \$13,000 per year will be used to carry on deferred maintenance work during the 10-year construction and development period. There will remain \$19,000 which is an adequate amount to pay for operation and maintenance and discharge the present obligations of the company during the 10-year period.

As recommended by the regional director, the plan included the acquisition of about 5,200 acres of land and water in the low lying portion of the project for wildlife development and management purposes and the provision of a system of regulated ponds for wildlife and waterfowl improvement to provide a waterfowl resting and nesting area on a very important flyway. Several of the reservoirs would provide fishing and recreational areas which have considerable value and the regional director's plan provided for acquiring necessary rights-of-way and construction of recrea-

tional facilities. I do not recommend the acquisition of this land for fish and wildlife purposes or the provision of recreational facilities at this time, and the regional director's report is hereby modified to exclude these proposed developments.

The total estimated cost of the project under price levels prevalent at this time, and taking into consideration the exclusion of the facilities for development of fish and wildlife and recreation, is \$2,679,000. Average annual benefits which would result from the modified project would be as follows:

Irrigation and drainage.....	\$160,000
Flood control	2,830
Fish and wildlife conservation.....	12,170
Total	175,000

Annual costs of the project, including amortization of the construction costs over the 85-year useful life of the project, at 2½ percent interest, and the average annual operation and maintenance cost of \$20,350 would be \$96,500. Ratio of benefits to costs for the modified project would thus be 1.8 to 1.

As shown in the regional director's report, the repayment analysis indicates that the water users could meet annual charges of \$6.30 per acre per year, or a total of \$45,400 annually on the 7,200 acres of irrigable land in the proposed project, of which, after a 10-year construction and development period, during which the water users would complete certain items of deferred maintenance as mentioned heretofore, \$26,570 would be available to repay on construction. Repayment of this amount over a 76-year period following the aforementioned development period would permit the return of the \$2,010,080 assigned by Public Law 848 as the maximum amount for repayment by the water users. In view of the expressed willingness of the water users to repay over the life of the project, I feel that the 76-year repayment period following a 10-year development period is justified in this case. Even though it is estimated that sedimentation will begin to encroach on conservation storage space at the end of 85 years, the life of the project may be extended through improved watershed practices, as mentioned above.

The balance of the cost of the project would be nonreimbursable, under the terms of Public Law 848. This nonreimbursable allocation is sufficient to cover the benefits to flood control and to the preservation and propagation of fish and wildlife which will be realized through construction of the project. Only in the event that the actual cost of constructing the project should prove to be substantially less than the present estimated cost, would the amount allocable to irrigation be less than the \$2,010,080 assigned to be repaid by the irrigators. In such event, a proper allocation of costs taking into consideration the project's benefits to flood control and to the preservation and propagation of fish and wildlife might indicate a reduction in the costs to be returned by the water users and should be made. For this reason, and because the subject of Federal policy in the making of cost allocations is now

under study, it is recommended that the matter of cost allocations be left open at this time.

The regional director's report on this project was reviewed by the field offices of the agencies represented on the Federal Inter-agency River Basin Committee, and no objections to the proposed plan were raised. The proposed report of the Department of the Interior, dated April 1, 1949, was transmitted to the Secretary of the Army and to officials of the States of New Mexico, Oklahoma, and Texas, in compliance with the provision of section 1 (c) of the Flood Control Act of December 22, 1944. The comments received were favorable, and copies are enclosed with the report of the regional director. In recognition of the desires of the Department of Agriculture for further clearance under the procedures of the Inter-agency Committee, it is recommended that a copy of the report be transmitted to the Secretary of Agriculture for his information and such comments as he may wish to make.

I recommend that you approve this report, and that you submit it to the President for approval as the project report on the Vermejo project, as required by the terms of Public Law 848, 81st Congress, and with the understanding that a further report may be made to the President at such time as the actual cost of the project is known, taking into consideration the portion of such cost that shall be allocated to the preservation and propagation of fish and wildlife and to flood control.

Respectfully,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved: Dec. 12, 1950.

(Signed) OSCAR L. CHAPMAN,
Secretary of the Interior.

OFFICE OF THE SECRETARY,
Washington 25, D. C., December 12, 1950.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: Public Law 848, Eighty-first Congress, second session, authorized the construction, operation, and maintenance of the Vermejo Reclamation project in New Mexico, including a provision, among others, that construction should not be commenced until a project report had been approved by you. My report on the Vermejo project, prepared by the Bureau of Reclamation, is attached for your approval.

The Vermejo project as authorized by Public Law 848 would provide for the rehabilitation of the badly deteriorated irrigation system of the Maxwell Irrigation District which now inadequately

serves the project area. The irrigated area would be stabilized at 7,200 acres by provision of an adequate water supply, an efficient distribution system, and an improved drainage system. Incidental flood control and fish and wildlife benefits would be realized through the construction of the project. Estimated cost of the project at April 1950 price levels is \$2,679,000. Public Law 848 provides that \$2,010,080, or as much of that amount as is approved for allocation to irrigation, shall be repaid under repayment contracts satisfactory to the Secretary of the Interior at the maximum rate and over such period of years as is consistent with the maximum repayment ability of the contracting organization. I find that, at the end of a ten year construction and development period, the local contracting entity will be able to repay \$26,570 annually toward construction, thus retiring the \$2,010,080 in 76 years. This, in my judgment, represents their maximum repayment ability.

Since Public Law 848 places a ceiling on the amount to be repaid by the irrigators, it also effectively renders nonreimbursable any costs in excess of that amount. Only in the event that the cost of constructing the project turns out to be substantially less than that presently anticipated would the amount allocable to irrigation be less than \$2,010,080. It is my recommendation, therefore, that the matter of allocation of costs (particularly that of an allocation of a portion of the cost of the project to the preservation and propagation of fish and wildlife in accordance with the terms of the act of August 14, 1946) be left open at this time and that it be taken up if the actual cost of constructing the project, when known, justifies its detailed consideration by an indication that an appropriate allocation of such costs would reduce the costs to the irrigators.

I recommend that you approve this report in order that the necessary steps may be taken to effectuate the provisions of Public Law 848.

Sincerely yours,

(Signed) OSCAR L. CHAPMAN,
Secretary of the Interior.

THE WHITE HOUSE,
Washington, June 22, 1951.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: I have today approved, in accordance with the requirements of section 3 of Public Law 848, 81st Congress, your report on the Vermejo Reclamation Project, New Mexico.

In reviewing your report, I note that detailed allocations of project costs have not yet been submitted and flood control costs are not reconciled with the computations of the Corps of Engi-

neers. I request that these figures be compiled and sent to me through the Director of the Bureau of the Budget before construction is undertaken.

My approval of the project report, therefore, is in recognition of the fact that this is a rescue project of an emergency nature and should not be considered as a precedent for similar authorizations in the future.

Sincerely yours,

(Signed) HARRY S. TRUMAN,
President.

An act to amend Public Law 848, Eighty-first Congress, second session. (Act of March 5, 1952, 66 Stat. 13, Public Law 269, 82d Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 3 of the Act of September 27, 1950, Public Law 848, Eighty-first Congress, is amended to read as follows:

"SEC. 3. Construction of the Vermejo reclamation project shall not be commenced until the President shall have approved a project report and there shall have been established, pursuant to the laws of the State of New Mexico, an organization with powers satisfactory to the Secretary, including the power to tax real property within its boundaries (which boundaries shall include the lands to be benefited by the project works) and the power to enter into a contract or contracts with the United States for payment or return, as the case may be, of the reimbursable costs of the project and such contract or contracts shall have been duly executed."

An act to amend the act of September 27, 1950, relating to construction of the Vermejo reclamation project. (Act of July 27, 1954, 68 Stat. 570, Public Law 542, 83d Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Act of September 27, 1950 (64 Stat. 1072), as amended, is further amended by adding thereto a new section reading as follows:

"SEC. 6. Upon the execution of a contract with the Vermejo Conservancy District supplementary to or amendatory of the contract dated August 7, 1952, between the district and the United States, pursuant to which supplementary or amendatory contract the district agrees to an increase in the total obligation repayable by it under the contract of August 7, 1952, in an amount equal to the face value of the outstanding bonds of the Maxwell Irrigation Company held by the Reconstruction Finance Corporation with unpaid interest, if any, accrued after July 1, 1953, and to a commensurate increase in the annual base charge provided in article 10 of said contract the entire obligation of said company to the

Reconstruction Finance Corporation shall be fully discharged and said bonds shall be returned to the debtor for cancellation. Thereupon the Secretary of the Interior shall request, and the Secretary of the Treasury shall cause to be transferred on the books of the Treasury to the account of the Reconstruction Finance Corporation from moneys appropriated for carrying on the functions of the Bureau of Reclamation and available for constructing the Vermejo reclamation project, a sum equal to the face value of the outstanding bonds, with accrued interest, as aforesaid, of the Maxwell Irrigation Company held by the Reconstruction Finance Corporation."

SEC. 2. The limit upon the amount repayable by the contracting organization which is set forth in the proviso to section 2 of the Act of September 27, 1950, shall be exclusive of any additional amount which the district undertakes to repay pursuant to section 1 of this Act.

WAPINITIA PROJECT

OREGON

JUNIPER DIVISION

The Juniper Division of Wapinitia Project was approved by the Secretary of the Interior on April 14, 1955, and authorized by Act of Congress on June 4, 1956 (70 Stat. 244-245, Public Law 559, 84th Cong., 2d sess.).

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington, D. C., October 6, 1954.

THE SECRETARY OF THE INTERIOR.

SIR: This is my proposed report on the potential Wapinitia project, Juniper division, Oregon. It is based on and includes the accompanying report of the regional director, Bureau of Reclamation, Boise, Idaho.

The project area is in the White River Basin of Wasco County in north-central Oregon. The works proposed for construction consist of a dam and reservoir located on the headwaters of Clear Creek, a tributary of the White River, which, in turn, is a tributary of the Deschutes River. The irrigable lands lie on Juniper Flat, a plateau between the Deschutes and White Rivers.

The project lands, consisting of 2,108 rather widely separated irrigable acres, are currently inadequately watered. Present water supply consists of diverted natural stream flows which, in this semi-arid area, are insufficient after July 1 to provide for irrigation needs. Actually in any year only about half of the irrigable acreage is supplied with water. By storage and stream regulation the proposed project would provide a full water supply for the lands. Important benefits would accrue as a result of irrigating additional land as well as from increased production of lands presently irrigated but inadequately watered. This would add significantly to the economic welfare of the general project area in which agriculture is the basic industry.

The project is economically justified with estimated irrigation benefits exceeding estimated costs in the ratio of 1.8 to 1.0. Considering direct or primary benefits only the ratio is 1.6 to 1.0. Significant recreation benefits would also accrue if recreational facilities are developed in accordance with plans set forth in the report of the National Park Service. In addition to the irrigation and recreation benefits there would be incidental fish benefits which have not been evaluated. The farmers who are members of the Juniper Flat District Improvement Co. and who would benefit have gone on record as being overwhelmingly in favor of the project.

The plan provides for the enlargement of the existing Clear Lake by the construction of Wasco Dam at a site about one-half mile below the outlet of the lake. The existing diversion works, canals, laterals, and other facilities necessary to put the water on the land are adequate and will be maintained by the Juniper Flat District Improvement Co. These works would be utilized without Federal rehabilitation or extension.

The estimated cost based on July 1953 prices which are essentially comparable with current prices is \$518,000. It is all allocated to irrigation and is reimbursable. If certain minimum basic recreational facilities, as discussed subsequently, are included in the project an additional \$34,870 should be included in the cost. Studies indicate that the water users would be able to repay the \$518,000 within a 40-year period after water is made available to the lands. In addition, payment capacity would be adequate to meet necessary annual operation, maintenance and replacement costs. The cost of the recreation facilities would be nonreimbursable.

The Juniper Flat District Improvement Co. has held water rights necessary for this project for many years. The Pacific Power & Light Co. holds a prior right for its hydro plant located near the mouth of the White River. Natural stream flow during the dry summer months has not been adequate to satisfy these prior rights; however, the company has never requested a shut-down of the irrigation diversion works. With the proposed development, during these same months stream flow would continue to be inadequate to satisfy the prior power water-right. Studies indicate that regulation afforded by Wasco Dam and return flow from the project lands would be beneficial to the power company. In any case, before start of construction on the proposed project, I recommend that the Irrigation District obtain an agreement from the power company that the proposed plan of operation of the irrigation project will be satisfactory to the company.

Appended to the substantiating materials of our regional director's report are preliminary regional reports of the Fish and Wildlife Service and National Park Service. Subsequent to preparation of our regional director's report a more complete report was received from the regional director of the National Park Service. This report is also appended to our regional director's report and supersedes the Park Service's preliminary report. The National Park Service report recommends the construction by the

Federal Government on a nonreimbursable basis of certain minimum basic recreation facilities at an estimated cost of \$34,870, even though recreation at the Wasco Reservoir would not be of national significance. I concur in this recommendation subject to assumption by local interests of responsibility for operation and maintenance. I also concur in the Fish and Wildlife Service recommendation that all project lands retained in Federal ownership be opened to free public use except for such portions as may be reserved by the sponsoring agency for purposes of safe, efficient operation, or protection of public property.

In addition to the recommendations concerning the Pacific Power & Light Co. prior water right, minimum recreational facilities, and free access to publicly owned lands discussed in the previous two paragraphs, I concur in and adopt the recommendations of the regional director as set forth in paragraph 25 of his report.

I recommend that you approve and adopt this report as your proposed report on the Wapinitia project, Juniper division, and that you authorize me in your behalf to transmit copies to the States of the Columbia River Basin and to the Secretary of the Army in accordance with requirements of the Flood Control Act of 1944 (58 Stat. 887), to the State of Oregon for the views and recommendations of the head of the agency exercising administration over the wildlife resources of that State in accordance with provisions of the act of August 14, 1946 (60 Stat. 1080), and to other interested Federal agencies for their comments.

Respectfully,

(Signed) W. A. DEXHEIMER,
Commissioner.

Approved and adopted October 25, 1954.

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington, D. C., March 31, 1955.

THE SECRETARY OF THE INTERIOR.

SIR: This is my report on the Wapinitia project, Juniper division, Oregon. It is based on, and includes, the proposed report on this project which you approved and adopted on October 25, 1954.

Copies of your proposed report were transmitted to the States of the Columbia River Basin and to the Secretary of the Army in accordance with the provisions of section 1 (c) of the Flood Control Act of 1944 (58 Stat. 887) and to the State of Oregon for comments from the head of the agency exercising administration

over the wildlife resources of that State in accordance with the provisions of the Act of August 14, 1946 (60 Stat. 1080). Copies of the report were sent also to the agencies represented on the Inter-Agency Committee on Water Resources for their comments. Comments have been received from all States, except the State of Utah, which would not be affected by the project, and agencies to which the report was sent and copies are attached.

In view of the favorable nature of the comments received, it does not appear that revision of your proposed report as a result of the review of various agencies is necessary. In particular the officials of the State of Oregon, as well as other review agencies, advised that they were pleased to recommend the authorization of the potential development.

Accordingly, I recommend that you approve and adopt this report as your report on the Wapinitia project, Juniper division, Oregon, and that you transmit it together with the attached comments to the President and subsequently to the Congress in accordance with the provisions of the Reclamation Project Act of 1939.

Respectfully,

(Signed) W. A. DEXHEIMER,
Commissioner.

Approved and adopted April 14, 1955.

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D. C., April 14, 1955.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: My report on the Wapinitia project, Juniper division, Oregon, is transmitted herewith, pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

Physical works being recommended for the Juniper division consist of Wasco Dam and Reservoir to regulate the flows of Clear Creek. Such regulation is required to supplement the water supply for 2,108 acres on Juniper Flat, a plateau between the Deschutes and White Rivers. The diverted natural stream flows currently used are insufficient after July 1 to provide for the irrigation needs. Including minimum recreation facilities, the estimated cost is \$553,000. Our studies indicate that the \$518,000 allocated to irrigation could be repaid by the water users in a 40-year period. The project has a total benefit cost ratio of 1.8 to 1.0 and a ratio of direct benefits only to cost of 1.6 to 1.0. The water users who

would benefit from the potential development are very much in favor of it.

The report has been transmitted to officials of the States of the Columbia River Basin and to the Secretary of the Army for their consideration and recommendations as required by the provisions of section 1 (c) of the Flood Control Act of 1944 (58 Stat. 887). It was also sent to the State of Oregon for the comments of the head of the agency exercising administration over the wildlife resources of that State as required by the provisions of the act of August 14, 1946 (60 Stat. 1080), and to the Departments of Agriculture, Commerce, Labor, and Health, Education, and Welfare, and the Federal Power Commission in accordance with inter-agency agreements. All reviewing agencies, except the State of Utah, which would not be affected by the project, have submitted comments, and copies are enclosed with the report.

I shall appreciate having advice concerning the relationship of the Wapinitia project, Juniper division, to your program before I transmit the report to the Congress for its consideration and appropriate action in accordance with the provisions of the Reclamation Project Act of 1939.

Sincerely yours,

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington 25, D. C., May 20, 1955.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This will acknowledge receipt of your letter of April 14, 1955, requesting advice concerning the relationship to the program of the President of your proposed report on the Wapinitia project, Juniper division, Oregon.

The report recommends construction of Wasco Dam and Reservoir to provide a supplemental water supply for 2,108 acres of irrigated land and thereby relieve severe water shortages that occur during July, August, and September. The estimated total cost, based on 1953 prices, is \$553,000. Of this amount, \$518,000 would be allocated to irrigation and be fully repaid, without interest, by the water users in a 40-year period. The balance of the cost amounting to \$35,000 would be allocated to nonreimbursable recreational facilities. Benefit-cost ratios are 1.8 for total benefits and 1.6 based on direct benefits. Under proposed new project operation, annual costs for all irrigation works except the Wasco Dam and Reservoir are estimated in the report to be \$5.30 per acre. Annual payments for the new construction cost of \$518,000 without interest over a 40-year period would be \$12,950 and including operation and maintenance and replacement charges of

\$920 would total \$13,870 or \$6.58 per acre. The total irrigation costs to the water users would therefore average about \$11.88 per acre annually.

In general, comments of interested State and Federal agencies either recommend or are not adverse to construction of the proposed dam and reservoir. The State of Oregon offers the principal comments, that: (1) The capital cost of the reservoir of \$246 per acre is rather high; (2) regulation of annual assessments, which it estimates range from \$10 to \$12 per acre, to reflect changed economic conditions, as recommended by the Bureau of Reclamation, would be of considerable assistance to landowners under adverse conditions; (3) in view of the prior water right held by the Pacific Power & Light Co., it would seem advisable to have a firm understanding on this matter before the plan of development is presented to Congress for authorization; (4) all possible Federal lands be opened to public use as recommended by the Fish and Wildlife Service; and (5) for the benefit of increased recreational use, any construction scars in the access to recreational areas should be eradicated.

The Department of Agriculture points out that the farm budget analysis contained in the report makes no allowance for decreases in nonfarm incomes that would result from the substantial increases in project labor required of the operator and his family. The Department estimates that, on a present worth basis, the total water-user payments would amount to about 63 percent of the Federal investment cost at 2.5 percent interest.

The National Park Service states the reservoir that would be created by construction of Wasco Dam would not be of national significance from a recreation standpoint. It recommends, however, complete recreational facilities for the project consisting of a public camp-ground and day-use area, a lodge and cabin resort area, and an organized camp area, at an estimated total cost of \$340,000. The day-use area would be developed by the Federal Government. The camp-ground (excepting replacement of existing camp units which is also proposed at Federal expense) would be financed by the administering agency (presumably a local agency). The lodge and cabin resort and the organized camp would be privately financed and developed under special-use permits. The cost of developing the replacement facilities and the minimum basic recreation facilities recommended by the National Park Service for construction by the Federal Government is estimated to be about \$35,000. The Department of Interior recommends construction of these latter facilities as part of the project on a nonreimbursable basis, subject to assumption by local interests of responsibility for operation and maintenance.

The Bureau of the Budget believes that, in view of the Pacific Power and Light Co.'s prior water right, a firm understanding should be reached with that company on the diversion and use of water and any authorization of the project should be contingent upon reaching an agreement acceptable to the Secretary as regards water supply for the project.

The Bureau also believes that replacement of the existing

recreational area, facilities, or values should be considered a cost of the project and allocated to the purpose served. In addition, minimum basic facilities and services for the general protection and operation of the project and for the accommodation or protection of the visiting public should be considered necessary adjuncts to the construction and operation of the project rather than recreational facilities and their costs should also be allocated to the major purpose of the project.

Accordingly, you are advised that, while there would be no objection to the submission of your report to the Congress, we would recommend that any legislation authorizing the proposed project conform with our above comments. No commitment, however, can be made at this time as to when any estimate of appropriation would be submitted for construction of the project, if authorized by the Congress, since this would be governed by the President's budgetary objectives as determined by the then prevailing fiscal situation.

It is requested that a copy of this letter be included with your report when it is submitted to the Congress.

Sincerely yours,

(Signed) DONALD R. BELCHER,
Assistant Director.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., June 7, 1955.

Hon. SAM RAYBURN,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: My report on the Wapinitia project, Juniper division, Oregon, is transmitted herewith pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

The report presents a plan for supplementing water supplies for 2,108 acres of irrigated land in Wasco County, Oreg., which would relieve severe water shortages that occur during the hot summer months. The estimated cost of the project is \$553,000, based on July 1953 prices, which are essentially the same as current prices. Of this sum, \$518,000 is tentatively allocated to irrigation and would be reimbursable within a 40-year period. The remaining \$35,000 is for minimum recreation features and is proposed to be nonreimbursable.

Copies of the proposed report of the Secretary of the Interior were transmitted to the States of Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming, and to the Secretary of the Army for their views and recommendations in accordance with the provisions of section 1 of the Flood Control Act of December

22, 1944, and to the agencies represented on the Inter-Agency Committee on Water Resources for their information and comments. Copies of all the comments which have been received are enclosed with the report.

The report and copies of all comments received were transmitted to the President. Enclosed is a copy of the letter of comments of May 20, 1955, from Assistant Budget Director Donald Belcher.

Sincerely yours,

(Signed) FRED G. AANDAHL,
Assistant Secretary of the Interior.

An act to authorize the Secretary of the Interior to construct, operate, and maintain the Juniper division of the Wapinitia Federal reclamation project, Oregon. (Act of June 4, 1956, 70 Stat. 244-245, Public Law 559, 84th Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the purpose of furnishing water for the irrigation of approximately two thousand and one hundred acres of arid land in Wasco County, Oregon, the Secretary of the Interior is authorized to construct, operate, and maintain the Juniper division of the Wapinitia Federal reclamation project in accordance with the provisions of the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto). The Secretary is further authorized to investigate, plan, and construct the minimum basic facilities required for access by the visiting public to, and for the protection of its health and safety and of public property on, lands withdrawn or acquired for the Juniper division. The costs thereof, in the amount of not more than \$34,870, shall be nonreimbursable and nonreturnable.

SEC. 2. There are hereby authorized to be appropriated for construction of the Juniper division \$563,000, plus such amounts, if any, as may be required by reason of changes in the cost of construction of the types involved therein as shown by engineering cost indices and, in addition thereto, such sums as are required to operate and maintain the division.

WASHITA BASIN PROJECT

TEXAS

Washita Basin Project was authorized by Act of Congress on February 25, 1956 (70 Stat. 28, Public Law 419, 84th Cong., 2d sess.).

UNITED STATES DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D. C., April 8, 1952.

THE SECRETARY OF THE INTERIOR.

SIR: This is my report on a plan of improvement for the Washita River Subbasin, Red River Basin, Okla. and Tex.

Copies of your proposed report which you adopted on February 25, 1952, were transmitted to the States of Oklahoma, Texas, and New Mexico and to the Secretary of the Army in accordance with the provisions of section 1 (c) of the Flood Control Act of 1944 (58 Stat. 887). In transmitting the report to the State of Oklahoma, the Governor was asked to include the comments of the head of the agency exercising administration over the wildlife resources of the State in accordance with the provisions of the act of August 14, 1946 (60 Stat. 1080). Copies of the report were sent also to the Federal agencies represented on the Federal Interagency River Basin Committee for their comments. Comments have been received in response to all of these transmittals, and copies are incorporated in this report, along with the proposed report.

The State of Oklahoma, in which the recommended project works would be located, concurs in the findings of the report and concludes that the Foss and Fort Cobb Reservoirs, if constructed according to plans, will in no way interfere or conflict with the comprehensive basin plan of development now being formulated by the Arkansas-White-Red Basins Interagency Committee. The head of the agency exercising administration over the wildlife resources of the State concurs in the wildlife features of the projects that are recommended and advises that his agency will do

the development work and assume administrative responsibility for the fish and wildlife features of the projects in accordance with the provisions of the report.

The reviewing officials of the States of Texas and New Mexico raise no objection to the plan of improvement recommended in your proposed report.

The Chief of Engineers, writing on behalf of the Secretary of the Army, concurs in your recommendation for authorization of the Foss and Fort Cobb Reservoirs at this time but comments upon several aspects of the report including the allocation of costs among the various functions and the method used in obtaining the allocation to flood control. These are matters which can be worked out in connection with the detailed planning for the project.

Both the State of Oklahoma and the Chief of Engineers favor the alternate plan presented for Fort Cobb Reservoir involving 20,000 more acre-feet of storage at an estimated additional cost of slightly over \$1 million. The Public Health Service recommended in this report that consideration be given to serving stream sanitation purposes from an enlarged Fort Cobb Reservoir. Further study and analysis should be made, before construction is undertaken, to determine the optimum reservoir capacity.

The Department of Agriculture suggests that the report recommendation be sufficiently flexible to accommodate any desirable modifications in plan that might result from the comprehensive studies now under way by the Arkansas-White-Red Basin Interagency Committee. We believe that the present recommendations do provide for this. In addition, the comments of that Department raise questions concerning procedures and policies followed in analyzing benefits, cost allocations, and repayment. We are not in agreement with the views expressed by the Department of Agriculture in these respects and full discussion of the points raised is contained in our reply to the Secretary of Agriculture, a copy of which is included herein.

Favorable comments have been received from other Federal agencies represented on the Federal Interagency River Basin Committee. After consideration of all the comments received, no revision of your proposed report is deemed necessary.

I recommend, therefore, that you adopt this as your final report, and that you transmit it to the President and subsequently to the Congress for appropriate action, in accordance with the Federal reclamation laws.

Sincerely yours,

(Signed) MICHAEL W. STRAUS,
Commissioner.

Approved and adopted April 14, 1952.

(Signed) OSCAR L. CHAPMAN,
Secretary of the Interior.

UNITED STATES DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., April 14, 1952.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: Herewith is my report on the plan of improvement for Washita River Subbasin, Red River Basin, Okla. and Tex., prepared and transmitted to you pursuant to section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1193).

The flows of the Washita River and its tributaries are almost completely unregulated and, as a consequence, only a small fraction of their potential value is being put to beneficial use. Under present conditions, they fail to provide an adequate dependable source of water for municipal supply or to assure water for any significant irrigation development. The quality of low-water flows is undesirable for domestic or municipal purposes and unsuitable for industrial uses. Uncontrolled, the Washita River causes heavy flood damages.

The mineral, low-cost fuel, and agricultural resources of the basin are conducive to expansion of industrial and agricultural activity providing adequate water supplies of suitable quality are made available. Development of these natural resources with attendant industrial growth would make an important contribution to our national economy.

My report presents a comprehensive plan for water-resource development in the Washita River Basin and recommends authorization of the Fort Cobb and Foss Reservoirs and associated irrigation and municipal water supply features. These two projects would serve the immediate needs for irrigation, municipal, and industrial water supply, and would provide a significant degree of flood control. Provisions for the propagation and preservation of fish and wildlife and for recreation are included.

The estimated cost of the two projects is \$37,429,000, based on January 1951 price levels. They have engineering and economic feasibility and the prospects for return of the reimbursable costs are considered sound.

Copies of the report have been sent to the States of the Washita and Red River Basins and to the Secretary of the Army for their views and recommendations as required by the provisions of the Flood Control Act of 1944 (58 Stat. 887), to the Governor of Oklahoma for comment under the act of August 14, 1946 (60 Stat. 1080), and to other Federal agencies represented on the Federal Interagency River Basin Committee for their comments. Copies of all the comments received in response to these transmittals are attached.

I shall appreciate having your views concerning the relation-

ship of this plan of improvement, and of the two projects recommended, to your program before I transmit the report to the Congress for its consideration and appropriate action in accordance with the Federal reclamation laws.

Sincerely yours,

(Signed) OSCAR L. CHAPMAN,
Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington 25, D. C., July 8, 1952.

Hon. JOSEPH C. O'MAHONEY,
*Chairman, Committee on Interior and Insular Affairs,
United States Senate, Washington 25, D. C.*

MY DEAR MR. CHAIRMAN: This will acknowledge your letter of May 8, 1952, requesting a report on S. 3133, a bill to authorize the Secretary of the Interior to construct, operate, and maintain the initial phase of the Washita River Basin reclamation project, Oklahoma.

Following recent discussions with the Secretary of the Interior on S. 3133 as well as on his proposed report on a plan of improvement for the Washita River Basin it has been agreed that the instant bill would be in accord with the President's program if amended (1) to provide only for immediate authorization of the Foss and Fort Cobb Reservoirs, and canals, laterals, pipelines, and other conduits for furnishing water to municipalities and other users for purposes of industrial and domestic water supply, flood control, and storage for possible future irrigation. In this regard it is understood that the allocations to flood control are to be in amounts agreed upon between the Chief of Engineers and the Secretary of the Interior; (2) to provide for repayment to the Federal Government of the total cost of furnishing municipal water supplies, with interest, at a rate equal to the average rate paid by the United States on long-term loans outstanding at the time repayment contract is negotiated within a period of 50 years regardless of whether the population and load growth of the respective cities develop as estimated in the proposed Department of the Interior report; (3) to provide for fish and wildlife facilities if authorized as part of the national program and financed under appropriations made for those specific purposes; and (4) to eliminate authorization for irrigation works at this time, except for storage at Foss and Fort Cobb Reservoirs.

The remaining features are considered as an inventory of future work pending further investigation to justify construction authorization.

Accordingly, you are advised that the proposed legislation would

be in accord with the program of the President if amended to conform with the above suggestions.

Sincerely yours,

(Signed) F. J. LAWTON,
Director.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D. C., December 30, 1952.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This acknowledges your letter of April 14, 1952, submitting your report on a plan of improvement for the Washita River subbasin, Red River Basin, Okla. and Tex.

The report presents a comprehensive plan for the control and utilization of the water resources of the Washita River subbasin in southern Oklahoma, consisting of seven reservoirs at the Foss, Fort Cobb, Purdy, Gracemont, Mountain View, Chickasha, and Durwood sites, together with related structures. The capital cost of the comprehensive plan is estimated at \$124,023,800, based on 1949 prices. The report estimates the equivalent annual costs required to amortize the Federal investment together with the cost of operation and maintenance at \$4,136,500, using a 2½ percent interest rate and a 100-year amortization period. The estimated annual benefits, including both direct and indirect benefits, total \$3,862,000. A comparison of the total annual benefits with the total annual costs of the comprehensive plan for the 7 reservoirs gives an unfavorable benefit-cost ratio of 0.93 to 1.0.

You recommend authorization at this time of the Fort Cobb and Foss Reservoirs and associated irrigation and municipal water supply features. These works would provide for (a) a municipal water supply for the towns of Elk City, Clinton, Anadarko, and Chickasha; (b) water for irrigation of 25,700 acres of land; (c) flood control; and (d) recreation and fish and wildlife propagation. The estimated cost of the Foss and Fort Cobb developments, based on January 1951 cost levels, is \$37,429,000 of which \$22,493,000 is for the 2 reservoirs, \$7,653,000 is for diversion dams and irrigation distribution works, \$6,704,000 is for municipal supply works, \$549,000 is for recreational facilities, and \$30,000 is for fish and wildlife facilities. Annual costs of the recommended improvements, based on a 100-year amortization period and a 2½ percent interest rate, are shown as \$1,257,700. Annual benefits based on use of both direct and indirect benefits from irrigation are shown as \$1,964,600. The ratio of benefits to costs is given as 1.56 to 1.0.

Of the total estimated cost of the projects recommended for authorization at this time, \$9,981,000 is allocated to municipal

water supply and \$10,643,000 is allocated to irrigation. Both of these items are considered reimbursable. Nonreimbursable allocations of costs are estimated at \$15,417,000 for flood control, \$839,000 for fish and wildlife and \$549,000 for recreation.

* * * * *

These conclusions and conditions are set forth in my letter of July 8, 1952, to the chairman of the Senate Committee on Interior and Insular Affairs, a copy of which was furnished your office on that date. You are, accordingly, advised that your proposed report and legislation to authorize the subject projects would be in accord with the program of the President if amended to conform with the conditions outlined in my letter of July 8, 1952, to the Senate Committee on Interior and Insular Affairs.

It will be appreciated if you will include a copy of this letter with your report when it is transmitted to the Congress.

Sincerely yours,

(Signed) F. J. LAWTON,
Director.

UNITED STATES DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., March 3, 1953.

Hon. JOSEPH M. DODGE,
Director, Bureau of the Budget,
Washington 25, D. C.

MY DEAR MR. DODGE: My proposed report to the Congress on the Washita River subbasin, Red River Basin, Okla. and Tex., is enclosed.

The report on the Washita River subbasin has been modified after consideration of former Director Lawton's letter of December 30, 1952, which indicated concurrence if the report were modified as suggested in his letter of July 8, 1952, to the chairman of the Senate Committee on Interior and Insular Affairs.

The irrigation features have been eliminated from the initial authorization request except for the storage space in the reservoirs, which would be available for use for irrigation should irrigation be authorized later. As suggested by the Chief of Engineers, the allocations to flood control will be given further consideration, and further consultation will be undertaken with the Chief of Engineers and the Secretary of the Army, during the time that detailed plans for the reservoirs are being prepared. Provision is made to require repayment to the Federal Government of the total cost of furnishing municipal water supplies, with interest, at a rate equal to the average rate paid by the United States on

long-term loans outstanding just prior to the time the repayment contract is negotiated (such rate to be rounded off to an even one-eighth of 1 percent), within a period of 50 years regardless of whether the population and load growth of the respective areas develop as estimated in the underlying report. The fish and wildlife facilities and recreation facilities have been eliminated.

In accordance with the provisions of Budget Circular A-47, specific facilities for fish and wildlife in the amount of \$30,000 have been eliminated. It is proposed, as stated in the attached letter to the Speaker of the House, that the remaining \$809,000 representing benefits to fish and wildlife resulting from these reservoirs be redistributed and charged to the reimbursable items and be paid for by the water users.

I would appreciate having advice concerning relationship of this report to the program of the President.

Sincerely yours,

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

UNITED STATES DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., July 28, 1953.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: This is my report on the plan of improvement for Washita River Subbasin, Red River Basin, Okla. and Tex., prepared and transmitted to you pursuant to section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1193).

The flows of the Washita River and its tributaries are almost completely unregulated and, as a consequence, only a small fraction of their potential value is being put to beneficial use. Under present conditions, they fail to provide an adequate, dependable source of water for municipal supply or to assure water for any significant irrigation development. The quality of low-water flows is undesirable for domestic or municipal purpose and unsuitable for industrial uses. Uncontrolled, the Washita River causes heavy flood damages. The mineral and low-cost fuel resources of the basin are conducive to expansion of industrial activity provided adequate water supplies of suitable quality are made available. Development of these natural resources with attendant industrial growth would make an important contribution to our national economy, and would permit economic expansion in an area that could too easily become an economic liability due to insufficient water.

My report presents a comprehensive plan for water-resource

development in the Washita River Subbasin and recommends the authorization of the most important initial features, the Fort Cobb and Foss Reservoirs and associated municipal water supply facilities, with provision of storage space for possible future irrigation use.

Copies of the report were sent to the States of the Washita and Red River Basins and to the Secretary of the Army for their views and recommendations as required by the provisions of the Flood Control Act of 1944 (58 Stat. 887), to the Governor of Oklahoma for comment under the act of August 14, 1946 (60 Stat. 1080), and to other Federal agencies represented on the Federal Inter-agency River Basin Committee for their comments. Copies of all the comments received in response to those transmittals are attached.

The report was reviewed by the Bureau of the Budget, and former Director F. J. Lawton, by letter of December 30, 1952, advised of certain changes which should be made. A copy of former Director Lawton's letter and the letter to which it refers are attached.

Subsequent to receipt of the letter of December 30, the report has been reviewed, and I hereby modify the previous plan in the following respects:

- (1) To recommend only immediate authorization of the Foss and Fort Cobb Reservoirs and related facilities for furnishing water to municipalities and other users for purposes of industrial and domestic water supplies, flood control, and storage for future possible irrigation.

- (2) To provide for repayment to the Federal Government of the total cost for furnishing municipal water supplies, with interest at a rate equal to the average rate paid by the United States on long-term loans outstanding at the time of project authorization, rounded to the next lowest one-eighth percent, within a period of 50 years regardless of whether the estimated population and load growth materializes in the areas involved.

- (3) To provide for elimination of the facilities for recreation and for enhancement of fish and wildlife values. This has been done in accordance with our understanding of the December 30 letter from the Bureau of the Budget heretofore mentioned, its letter dated July 8, 1952, relating to this project, and its Circular A-47. The elimination of specific facilities for fish and wildlife and for recreation has reduced the cost of the project by \$30,000 and \$549,000, respectively. I propose that the remainder of the cost heretofore allocated to fish and wildlife, \$809,000, be redistributed among the reimbursable functions of the project. Complete fulfillment of this redistribution will, I am advised, require a provision in any bill to authorize the project which exempts it from the requirements of the act of August 14, 1946 (60 Stat. 1080).

- (4) To eliminate authorization of irrigation works except for storage at Foss and Fort Cobb Reservoirs, without prejudice to later consideration of irrigation works which will make use of this storage.

- (5) The estimated cost of the projects now recommended is

\$29,197,000, based on price levels prevailing in January 1951, which are about 10 percent below current price levels. The projects have engineering and economic feasibility and the prospects for the return of reimbursable costs are good. The costs are tentatively allocated as follows: To flood control, \$15,417,000; to irrigation, \$3,410,000; and to municipal water supply, \$10,370,000. The tentative allocation to flood control is probably substantially greater than would result under the procedure currently used by the Corps of Engineers; and the other tentative allocations are correspondingly lower. Before construction of the project is initiated, this Department will give further consideration to the allocation of project costs and to the comments of the Chief of Engineers and other reviewing agencies. It is the purpose of this Department to assist in the development of cost allocation procedures which will be acceptable by all agencies.

(6) Contracts will be negotiated with the municipal and industrial water users and if necessary with the State or other interested local political entities to provide for the return of the costs finally allocated to that purpose, and to provide for subsequent assistance by the municipal and industrial water users as may be necessary in the repayment of the part of the cost allocated to irrigation which is beyond the repayment ability of the water users or, if irrigation should not be developed, for repayment without interest of the cost of irrigation storage capacity provided in the reservoirs.

(7) Before separate irrigation features which may be authorized in the future are undertaken, repayment arrangements will be negotiated with the irrigation water users and if necessary with the State or other interested political entities for repayment of the reimbursable costs finally allocated to irrigation and not otherwise provided to be repaid.

This report constitutes a revision of the report of the former Secretary and of my earlier report transmitted to the Bureau of the Budget by letter of March 3, 1953. This report is based on and includes the accompanying report adopted by the former Secretary on April 14, 1952, except as modified herein.

I shall appreciate having your views concerning the relationship of this plan of improvement, and of the projects recommended, to your program before I transmit the report to the Congress for its consideration and appropriate action in accordance with the Federal reclamation laws.

Sincerely yours,

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D. C., July 28, 1953.

The Honorable the SECRETARY OF THE INTERIOR.
(Attention H. J. Slaughter).

MY DEAR MR. SECRETARY: Receipt is acknowledged of your letter of July 28, 1953, submitting your revised report on the Washita River Subbasin, Red River Basin, Okla. and Tex., and requesting advice concerning its relationship to the program of the President.

You state that this report constitutes a revision of the report of the former Secretary and of your earlier letter to the Bureau of the Budget of March 3, 1953.

The estimated cost of the project now recommended is \$29,-197,000 based on prices prevailing in January 1951. This cost is tentatively allocated as follows: to flood control, \$15,417,000—nonreimbursable; to irrigation storage, \$3,410,000, and to municipal, industrial, and domestic water supplies \$10,370,000—reimbursable items. We are advised that the benefit-cost ratio, including indirect benefits, is 1.3 to 1.0, exclusive of irrigation benefits but including cost of irrigation storage.

The modified report recommends: (1) Immediate authorization of the Foss and Fort Cobb Reservoirs and related facilities for furnishing water to municipalities and other users for purposes of industrial and domestic water supplies, flood control, and storage for future possible irrigation; (2) elimination of irrigation works except for storage space in the reservoirs without prejudice to later consideration of irrigation works which would make use of this storage; (3) elimination of facilities for recreation and enhancement of fish and wildlife values and inclusion of only those works necessary for the prevention of loss of or damage to fish and wildlife, the costs of which have been reallocated along with other project costs to the various purposes for which the project would be undertaken; (4) provision be made to require repayment to the Federal Government of the total cost of furnishing municipal water supplies, with interest, within a period of 50 years regardless of whether the population and load growth of respective areas develop as estimated in the report.

Other agencies, in commenting on the original report, questioned (1) the high cost of water storage and (2) the method used in allocating costs of the project. These conditions continue to exist in your modified report. As discussed at our meeting on July 27, 1953, however, and as noted in your letter of July 28, 1953, it is understood that—

(1) There is a difference in viewpoint between the Department of the Interior and the Chief of Engineers, United States Army, as to the proper method of computing flood-control benefits and allocating costs thereto;

(2) Use of the standard Corps of Engineers procedure for allocating costs would result in a substantial reduction in the \$15,417,000 allocated by the Department of the Interior to flood control with corresponding increases in the amounts allocated to reimbursable purposes, water supply, and storage for future irrigation;

(3) It is the fixed purpose of the Department to develop in cooperation with the Corps of Engineers joint standards that can be used by all agencies in allocating costs;

(4) The final allocation of cost to flood control on the Washita project will be revised to conform with such procedures and standards;

(5) The final allocations of costs to the other purposes for which the project would be constructed would correspondingly be revised; and

(6) The State of Oklahoma would be expected to assume responsibility for repayment of the costs so allocated to reimbursable purposes which are beyond the limits of the ability of local beneficiaries to repay.

The Bureau of the Budget agrees with the above objectives and believes that authorization of the Washita project should be subject, in addition to the recommendations contained in your revised project report, to the following specific conditions:

(1) The proposed allocations of project cost to flood control and to the reimbursable purposes of water supply and future irrigation storage shall be adjusted to conform to the procedures and standards which, prior to initiation of construction, may be established for use by all agencies.

(2) Definite provision in legislation authorizing the project to be made for the repayment of all reimbursable costs. Construction of the project should be made contingent on the assumption by the State of Oklahoma, together with local organizations, of financial responsibility for repayment of costs allocated to municipal, industrial and domestic water supplies that may be found to be beyond the ability of the water users to repay. The State should also be required to guarantee repayment for the costs allocated to future irrigation storage.

Under this procedure the State and local organizations could utilize their powers of taxation or assessment to assure reimbursement to the Federal Government of the funds invested in municipal water and irrigation storage. We believe this is in harmony with the statement by the President in his address on the state of the Union.

* * * The best natural resources program for America will not result from exclusive dependence on Federal bureaucracy. It will involve a partnership of the States and local communities, private citizens, and the Federal Government, all working together. This combined effort will advance the development of the great river valleys of our Nation and the power that they can generate. * * *

(3) Some reasonable period, of say 10 years, shall be set within which facilities constructed for future irrigation water supplies would be required to be placed in use or repayments would start

and be completed within 50 years thereafter regardless of use. In the event this storage is utilized for municipal water-supply purposes interest should be paid on the investment.

You are accordingly advised that there would be no objection to the submission of your proposed project report to the committee or to authorization of the project if the legislation conforms to your modified report and the conditions outlined above. It is requested that a copy of this letter be included with your modified report when it is submitted to the Congress.

Sincerely yours,

(Signed) ROWLAND HUGHES,
Assistant Director.

UNITED STATES DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., July 29, 1953.

Hon. JOSEPH W. MARTIN,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: My report on a plan of improvement for Washita River Subbasin, Red River Basin, Okla. and Tex., is transmitted herewith pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

The report presents a comprehensive plan for water-resource development in the Washita Basin and recommends authorization of the Fort Cobb and Foss Reservoirs and associated municipal water-supply facilities. These two projects would serve the immediate needs for municipal water supplies and flood control and provide storage space for possible future irrigation use.

Copies of the proposed report of the Department of the Interior on this development were transmitted to the States of Oklahoma, New Mexico, and Texas, and to the Secretary of the Army for their views and recommendations in accordance with the provisions of section 1 of the Flood Control Act of December 22, 1944; to the State of Oklahoma for the report and recommendations of the head of the agency exercising administration over wildlife resources of that State in accordance with the provisions of the act of August 14, 1946; and to the agencies represented on the Federal Inter-Agency River Basin Committee for their information and comments. Copies of all the comments which have been received in response to the above transmittals are enclosed.

My report and copies of all the comments were transmitted to the President through the Bureau of the Budget. I have been advised by the Bureau of the Budget that there would be no objection to the submission of the report to the Congress or to authorization of the recommended features if the legislation conforms to my report and the conditions set forth in its letter. A

copy of Assistant Budget Director Rowland Hughes' letter of July 28, 1953, is enclosed.

I recommend that the Fort Cobb and Foss Reservoirs and associated municipal water facilities be authorized.

Sincerely yours,

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

An act to authorize the Secretary of the Interior to construct, operate, and maintain the Washita River Basin reclamation project, Oklahoma. (Act of February 25, 1956, 70 Stat. 28, Public Law 419, 84th Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Interior is authorized to construct, operate, and maintain the Washita River Basin reclamation project, Oklahoma, in accordance with the Federal reclamation laws (Act of June 17, 1902, and Acts amendatory thereof or supplementary thereto), except so far as those laws are inconsistent with this Act, for the principal purposes of storing, regulating, and furnishing water for municipal, domestic, and industrial use, and, for the irrigation of approximately twenty-six thousand acres of land and of controlling floods and, as incidents to the foregoing for the additional purposes of regulating the flow of the Washita River, providing for the preservation and propagation of fish and wildlife, and of enhancing recreational opportunities. The Washita project shall consist of the following principal works: A reservoir at or near the Foss site on the main stem of the Washita River; a reservoir at or near the Fort Cobb site on Pond (Cobb) Creek; and canals, pipelines, and other conduits for furnishing water for municipal, domestic, and industrial use, and for irrigation.

SEC. 2. In constructing, operating, and maintaining the Washita project, the Secretary shall allocate proper costs thereof in accordance with the methods used in determining the allocations made on pages 68, 69, and 70, of House Document 219, Eighty-third Congress, but with appropriate adjustments for changes in actual cost of construction, under the following conditions:

(a) Allocations to flood control, recreation, and the preservation and propagation of fish and wildlife shall be nonreturnable.

(b) Allocations to municipal water supply, including domestic, manufacturing, and industrial uses, shall be repayable through contracts with municipal corporations, or other organizations as defined by Section 2, Reclamation Project Act of 1939 (53 Stat. 1187). Such contracts shall be precedent to the commencement of construction of any project unit affecting the individual municipalities, and shall provide for repayment of construction costs allocated to municipal water supply in not to exceed fifty years from the dates water is first delivered for that purpose, and payments of said construction costs shall include interest on unamortized balances of that allocation at a rate equal to the average rate (which rate shall be certified by the Secretary of the Treasury) paid by the United States on its marketable long-term loans

outstanding on the date of this Act: *Provided*, That such contracts shall provide that annual municipal repayments shall continue at the same rates until the costs of Foss and Fort Cobb Reservoirs allocated to irrigation are fully repaid: *Provided further*, That if irrigation works are constructed, as hereinafter provided, said annual repayment rates shall continue so long as the costs of irrigation works are unpaid.

(c) The authorization for construction of the irrigation works, exclusive of Foss and Fort Cobb Reservoirs, shall be limited, as to each reservoir, to a period of ten years from the commencement of the delivery of municipal water from the reservoir on which the irrigation unit is dependent. Any contract entered into under section 9, subsection (d) of the Reclamation Project Act of 1939, for payment of those portions of the costs of constructing, operating, and maintaining the Washita project which are properly allocable to irrigation and which are assigned to be paid by the contracting organization shall provide for the repayment of the portion of the construction cost of the project assigned to any contract unit or, if the contract unit be divided into two or more blocks, to any such block over a period of not more than fifty-five years, exclusive of any permissible development period, or as near thereto as is consistent with the adoption and operation of a variable payment formula which, being based on full repayment within the period stated under average conditions, permits variance in the required annual payments in the light of economic factors pertinent to the ability of the organization to pay: *Provided*, That nothing in this section is intended to preclude the temporary furnishing of irrigation water under contracts appropriate for that purpose from Foss and Fort Cobb Reservoirs with or without the construction of specific irrigation works.

SEC. 3. Construction of the Washita project herein authorized may be undertaken in such units or stages as in the opinion of the Secretary best serves the project requirements and the relative needs for water of the several prospective users. Repayment contracts negotiated in connection with each unit or stage of construction shall be subject to the terms and conditions of section 2 of this Act.

SEC. 4. The Secretary may, upon conclusion of a suitable agreement with any qualified agency of the State of Oklahoma or a political subdivision thereof for assumption of the administration, operation, and maintenance thereof at the earliest practicable date, construct or permit the construction of public park and recreational facilities on lands owned by the United States adjacent to the reservoirs of the Washita project, when such use is determined by the Secretary not to be contrary to the public interest, all under such rules and regulations as the Secretary may prescribe. No recreational use of any area to which this section applies shall be permitted which is inconsistent with the laws of the State of Oklahoma for the protection of fish and game. The costs of constructing, operating, and maintaining the facilities authorized by this section shall not be charged to or become a part of the costs of the Washita River Basin project.

SEC. 5. Expenditures for Foss and Fort Cobb Reservoirs may be made without regard to the soil survey and land classification requirements of the Interior Department Appropriation Act, 1954 (43 U. S. C. 390a).

SEC. 6. There is hereby authorized to be appropriated for construction of the works authorized to be constructed by section 1 of this Act the sum of \$40,600,000 plus such additional amount, if any, as may be required by reason of changes in the costs of construction of the types involved in the Washita River Basin project as shown by engineering indices. There are also authorized to be appropriated such sums as may be required for the operation and maintenance of said works.

WASHOE PROJECT

NEVADA-CALIFORNIA

Washoe Project was authorized by the Act of Congress dated August 1, 1956 (70 Stat. 775, Public Law 858, 84th Cong., 2d sess.).

UNITED STATES DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington, D. C., October 12, 1954.

THE SECRETARY OF THE INTERIOR.

SIR: This is my proposed report on the Washoe Project, Nevada and California. It is based on and includes the accompanying ¹ report of the Regional Director, Salt Lake City, Utah, dated September 17, 1954. Appended to the Regional Director's report are the Substantiating Materials and Reports of the Fish and Wildlife Service, National Park Service, Corps of Engineers, and Public Health Service.

The Washoe Project would provide, through regulation of the stream flows of the East Carson and Little Truckee Rivers, irrigation water to supplement present supplies and provide a full supply to lands in Carson Valley and the Empire, Dayton, and Fort Churchill areas. Hydroelectric energy would be generated to meet urgent local needs and to provide a portion of the repayment revenues. Flood control, recreation, public health, and fish and wildlife benefits would also be created by this multi-purpose development. Construction of this project is economically justified in that the evaluated annual benefits exceed the estimated annual costs by the ratio of 1.8 to 1.0.

Better regulation of the available water supply is urgently needed in the Washoe Project area which includes the drainage basins of the Truckee and Carson Rivers lying adjacently on the eastern slope of the Sierra Nevada. Runoff of these two rivers is largely from snow-melt which comes as torrential floods in the spring but diminishes sharply after midsummer. Surplus ground

¹ Excluded from this publication.

water in portions of both basins menaces health and property and seriously hinders crop production. Demands for electric energy are outgrowing the supplies despite opportunities for new power production on the Truckee and Carson Rivers.

Some regulation of the Truckee and Carson River flows has been accomplished by Bureau of Reclamation developments on these rivers but the control provided to date is only a part of that required for optimum utilization of the water resources. The Boca Reservoir of the Truckee River Storage Project regulates flows of the Little Truckee River for irrigation of about 26,800 acres in Truckee Meadows. The Washoe County Water Conservation District operates the project and is repaying the project construction costs under a contract with the Federal Government. The Newlands Project utilizes water of both the Truckee and Carson River systems for irrigation and for the generation of hydroelectric energy. Truckee River water is regulated at Lake Tahoe and some regulation is provided at Boca Reservoir for the Little Truckee River water utilized under the Newlands Project. The Lahontan Reservoir provides storage for Carson River water, for imported Truckee River water, and for generation of electric energy at the Lahontan Powerplant. The Truckee-Carson Irrigation District has contracted with the United States for operation of the Newlands Project and for payment of construction costs.

The Washoe Project would be integrated with the existing Truckee River Storage and Newlands Projects. The plan of development provides for the full irrigation of 5,100 acres and the supplemental irrigation each year of 38,160 acres in Carson Valley, and the supplemental irrigation each year of 6,300 acres in the Empire, Dayton, and Fort Churchill areas. In addition, during dry cycles it would firm the existing supplies for the 26,800 acres of land in the Truckee River Storage Project and the 70,000 acres under water right contract in the Newlands Project. Local electric power supplies would be increased by a net annual amount of 91,371,000 kilowatt-hours. Operation of the project would reduce flood damages by an average annual amount of \$288,900, would alleviate seepage on 18,170 acres in Carson Valley and 12,730 acres in Truckee Meadows, preserve and propagate the fish and wildlife resources in the basins, improve public health, and increase recreational values. Although the project would not increase the water supplies of Indian lands in the area which are now using only a small portion of the water available to them, it would in no way infringe on the existing decreed rights of the Indians.

The Washoe Project would also be closely coordinated with the Truckee River channel improvement proposed by the Corps of Engineers and conditionally authorized by the Congress in the Flood Control Act of 1954. The authorization for this improvement for flood control will not become effective unless and until the Washoe Reclamation Project shall have been authorized pursuant to law.

In the Truckee River Basin the Stampede Reservoir on Little Truckee River would be built to capacity of 126,000 acre-feet. Reservoir water would be discharged through the Stampede

tunnel and Calvada penstock to the 20,000-kilowatt Calvada powerplant on the Truckee River. Below the powerplant the water would be regulated at the 226 acre-foot Calvada Reservoir. It would then flow in the Truckee River channel and through existing facilities to meet and supplement established rights and to replace some of the Carson River water now used on the Newlands Project for use higher upstream. On lands of the Truckee River Storage Project in Truckee Meadows deep drains would be installed and wells would be constructed to relieve artesian pressure.

In the Carson River Basin the Watasheamu Reservoir on the East Fork of the Carson River would be constructed to a capacity of 115,000 acre-feet. The reservoir would regulate flood flows now running to waste and some water now used by the Newlands Project which would be replaced by Washoe Project water from the Truckee River. Releases from Watasheamu Reservoir would pass through the 8,000-kilowatt Watasheamu powerplant at the base of the dam. The water would then be regulated at the Dressler Diversion Dam and Afterbay that would impound 1,040 acre-feet. At the dam some water would be diverted into the potential Carson Canal that would serve new lands along its course in Carson Valley and that would also deliver water to the West Fork of Carson River for distribution by existing canals diverting from that stream. Some water bypassing Dressler Diversion Dam, together with return flows reaching the stream, would be diverted to lands in Carson Valley and in the Empire, Dayton, and Fort Churchill areas. The remaining flows passing Dressler Dam would continue on to the Lahontan Reservoir of the Newlands Project. The existing Allerman Canal in the Carson Valley would be enlarged and extended. Some new laterals would be constructed and existing laterals would be improved and extended as necessary. Systems of main drains would be installed in Carson Valley.

Various aspects of the Washoe Project would contribute to public health through the lowering of ground water tables and stream regulation.

The National Park Service and the Forest Service recognize an important recreational potential at the Stampede Reservoir. The plans of the Regional Director do not include provision of recreation facilities other than those for protection and accommodation of the visiting public at the dam structure. The National Park Service recommends that minimum basic facilities for protection and accommodation of the visiting public at the reservoir area should also be provided on a nonreimbursable basis and estimates that the costs of such facilities, which would cover day-use of the reservoir only, would be approximately \$100,000. I concur in this recommendation provided that responsible local interests agree to assume operation and maintenance of the completed facilities. Consistent with this the facilities for accommodation of the public at the dam structure, although quite nominal, also should be nonreimbursable. Accordingly, the proposed Washoe Project is modified to incorporate minimum basic recreation facilities on the above basis.

The total estimated cost of the project, based on July 1954

prices, is \$41,558,000 of which a reimbursable allocation of \$17,391,000 is made to irrigation and drainage, and \$18,247,000 to power. A nonreimbursable allocation of \$5,820,000 is made to flood control and \$100,000 to recreation. Annual operation, maintenance and replacement costs amount to \$210,540 of which \$51,130 is allocated to irrigation and drainage, \$152,850 to power and \$6,560 to flood control.

Following suitable development periods for various project lands, irrigation and drainage interests probably would repay \$8,180,000 of the irrigation and drainage allocation. The remaining portion of the allocation would be repaid from net power revenues accruing in the 14-year period after payment with interest at 2.5 percent on the unamortized balance of the \$18,247,000 allocated to power and \$720,000 interest during construction. The irrigation and drainage repayment would be completed in 52 years after the close of the last development period.

The Fish and Wildlife Service, in cooperation with the Bureau and the State Fish and Game Commissions of Nevada and California, has studied the fish and wildlife aspects of the proposed development. These aspects of the project, like the engineering and agricultural aspects, can be finally appraised when structural designs and operating criteria are determined. The preservation and propagation of these resources, one of the purposes of the project, will be assured to the greatest extent possible through the continued cooperation of the Bureau of Reclamation with the Fish and Game Commissions of California and Nevada and with the Fish and Wildlife Service. It is planned that a fish ladder be constructed at Calvada Dam and that protective devices for deer such as bridges and fences in connection with the Carson Canal would be provided. Plans also include provision for certain water releases from reservoirs to protect fish as recommended by the Fish and Wildlife Service, and other such provision may be possible when structural and operational refinements are fully evaluated. Other recommendations of that Service which may be considered an integral part of the project plan are set forth and discussed on Pages 94 to 97 of the Substantiating Materials section attached to the Regional Director's report.

Details of the facilities for all purposes that are to be incorporated in the project, including but not limited to those for fish and wildlife conservation mentioned above, can be finally determined after project authorization during the preparation of the definite plan.

Detailed studies of fish and wildlife resources affected by the project will be conducted in accordance with the Act of August 14, 1946 (60 Stat. 1080). Such reasonable modifications in the authorized project facilities would be made by the Secretary of the Interior as he may find appropriate to preserve and propagate these resources.

I concur in and adopt the recommendations of the Regional Director as set forth in paragraph 51 of his September 17, 1954, report.

I recommend that you approve and adopt this report as your

proposed report on the Washoe Project and that you authorize me in your behalf to transmit copies to the States of Nevada and California and to the Secretary of the Army, in accordance with requirements of the Flood Control Act of 1944 (58 Stat. 887), to the States of Nevada and California for the views and recommendations of the head of the agency exercising administration over the wildlife resources of these States, in accordance with provisions of the Act of August 14, 1946 (60 Stat. 1080), and to the other interested Federal agencies for their comments.

Respectfully,

(Signed) E. V. LINDSETH,
Acting Commissioner.

Approved and adopted: October 18, 1954.

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

UNITED STATES DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D. C., March 22, 1955.

THE SECRETARY OF THE INTERIOR.

SIR: This is my report on the Washoe Project, Nevada-California. It is based on and includes the proposed report on this potential project which you approved and adopted on October 18, 1954.

Copies of your proposed report were transmitted to the States of Nevada and California and to the Secretary of the Army in accordance with the provisions of section 1(c) of the Flood Control Act of 1944 (58 Stat. 887), and to the State of Nevada as required by the Act of August 14, 1946 (60 Stat. 1080). Copies were also transmitted to other interested Federal agencies in accordance with inter-agency agreement. Copies of all comments received are attached.

The State of Nevada, in endorsing the Washoe Project and requesting its immediate authorization, indicated that the enabling legislation for its authorization should provide:

a. For review of the allocation of project costs prior to construction.

b. That preservation, propagation and development of fish and wildlife be declared a purpose of the project and their development be made nonreimbursable.

c. That during preparation of the definite plan report continuing studies be made of high water elevation of Lake Tahoe under project operation and of the possibility of relief therefrom, and

d. That the excess land provision of the Federal Reclamation laws should not be applicable to lands receiving supplementary water under the Washoe Project.

We concur in and expect to accommodate items a, b, and c in our future studies of the Washoe Project. Item d, however, raises a policy problem of major importance. On the one hand, Federal assistance to irrigation in the form of interest-free money has traditionally been justified by the creation of family-size farms, thereby spreading benefits to the greatest possible number of people. On the other hand, a long established irrigation community is affected and strict application of existing laws may cause some readjustment and engender some opposition.

The comments of the State of California concern principally steps and measures which will safeguard California's rights in the Truckee and Carson River basins and which will provide for future development of its water resources including a recommendation for early negotiation of a Nevada-California Interstate Compact.

The Chief of Engineers, Department of the Army, concludes that the improvements recommended in the proposed report appear feasible and compatible with the improvements proposed by the Corps of Engineers.

The comments of the other Federal agencies were either favorable to the proposed development or contained suggestions for further studies and clarifications that can be accommodated in post-authorization investigations.

In view of the nature of the comments received it does not appear that revision of your proposed report as a result of the review of the various agencies is necessary. The President and the Congress will wish to consider specifically, I am sure, the question of relief from the excess land provisions of Reclamation law as suggested by the State of Nevada if it is before them in the terms of proposed legislation.

I recommend that you approve and adopt this report as your report on the Washoe Project, Nevada-California, and that you transmit it together with the attached comments to the President and subsequently to the Congress in accordance with the provisions of the Reclamation Project Act of 1939.

Respectfully,

(Signed) W. A. DEXHEIMER,
Commissioner.

Approved and adopted: April 20, 1955.

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

UNITED STATES DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., April 20, 1955.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: My report on the Washoe Project, Nevada-California, is transmitted herewith, pursuant to the provisions of section 9(a) of the Reclamation Project Act of 1939 (53 Stat. 1187).

The multiple-purpose Washoe Project, on the eastern slope of the Sierra Nevada, would provide needed irrigation, power, flood control, public health, recreation, and fish and wild-life benefits through regulation of streamflow and storage of snowmelt flood waters on the East Carson and Little Truckee Rivers and drainage of surplus groundwaters in some areas of the basin.

Full irrigation of 5,000 acres and supplemental irrigation of more than 44,000 acres would be provided. In addition, existing supplies for nearly 27,000 acres in the Truckee River Storage Project and for 70,000 acres under water right contract in the Newlands Project would be firmed during dry cycles.

Power supplies in the area would be increased by about 91,400,000 kilowatt-hours annually from the two proposed powerplants. Operation of the project also would reduce flood damages by an average annual amount of about \$290,000, would alleviate seepage on over 18,000 acres in Carson Valley and about 13,000 acres in Truckee Meadows, preserve and propagate the fish and wildlife resources in the basins, improve public health, and increase recreational values by the creation of two reservoirs.

Total estimated project construction cost, based on July 1954 prices, is about \$41,600,000. Of this, \$17,400,000 is allocated tentatively to irrigation and drainage, \$18,300,000 to power, \$5,800,000 to flood control and \$100,000 to recreation. All costs except those allocated to flood control and recreation would be reimbursed within 52 years after the close of the last development period. The estimated annual benefits exceed the estimated annual costs by the ratio of 1.8 to 1.0.

The report has been transmitted to officials of the States of Nevada and California and to the Secretary of the Army for their consideration and recommendations as required by the Flood Control Act of 1944 (58 Stat. 887). It was sent also to the State of Nevada for the comments of the head of the agency exercising administration over the wildlife resources of that State as required by the provisions of the Act of August 14, 1946 (60 Stat. 1080), and to the Departments of Agriculture, Commerce, Labor, and Health, Education and Welfare, and the Federal Power Commission in accordance with inter-agency agreements. All reviewing agencies except the Department of Commerce have submitted comments and copies are enclosed with the report.

I recommend that the Washoe Project be authorized as set forth in my report. I shall appreciate having advice concerning the relationship of the Washoe Project to your program before I transmit the report to the Congress for its consideration and appropriate action in accordance with the provisions of the Reclamation Project Act of 1939.

Sincerely yours,

(Signed) DOUGLAS MCKAY,
Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington 25, D. C., May 20, 1955.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This will acknowledge your letter of April 20, 1955, requesting advice concerning the relationship to the program of the President of your report on the Washoe project, Nevada-California.

This multiple-purpose project would provide a full water supply for 5,100 new acres and supplemental water for 44,460 acres presently under irrigation. It would firm up water supplies for 26,800 acres in the Truckee River Storage project and 70,000 acres in the Newlands project by providing holdover storage for use during dry cycles. There would also be power, drainage, flood control, fish and wildlife, public health, and recreational benefits.

The total estimated cost is about \$41,600,000, of which \$35,700,000 is reimbursable—\$17,400,000 being tentatively allocated to irrigation and drainage, and \$18,300,000 to power. Non-reimbursable allocations include \$5,800,000 to flood control and \$100,000 to recreation. The benefit-cost ratios are 1.8 and 1.4 for total and direct benefits respectively, based on amortization in 100 years at 2.5 percent. If amortized over 50 years these ratios would be 1.5 and 1.1.

It is estimated that the water users would repay \$8,180,000, without interest, in 50 years or about 47 percent of the allocation to irrigation and drainage. On the basis of an average selling rate of 9.0 mills per kilowatt-hour, as contemplated in the report, the power investment would be repaid with interest at 2.5 percent in about 50 years. Thereafter net revenues from power sales would be applied toward payment of the irrigation and drainage investment that is beyond the ability of the water users to repay. In this way the entire reimbursable irrigation investment would be repaid, without interest, in about 65 years.

The State of Nevada endorses the project, requests immediate authorization, and states that enabling legislation should provide

that: (1) a review be made of cost allocations prior to construction; (2) flood control benefits be based on present prices; (3) preservation, propagation, and development of fish and wildlife be declared a purpose of the project and their development be non-reimbursable; (4) continued studies be made of Lake Tahoe high water elevations under project operation to determine damages to shore property and possible relief therefrom; and (5) excess land provisions of Federal reclamation laws not be made applicable to lands receiving supplemental water.

The Truckee Public Utility District, California, protests direct tunnel diversion of waters as proposed and states that such diversions would seriously and detrimentally affect the natural resources of eastern Nevada County. The California State agencies recommend that: (1) new regulatory storage and water supply for the project be based upon runoff of streams as impaired by present and future use in the areas of origin in California; (2) the amount of water available to the project be completely determined and defined through a compact; (3) the Stampede Reservoir be so constructed that it can be enlarged to care for future water requirements of lands in California, and sufficient land be acquired adjacent to the reservoir to permit adequate development of recreational facilities; (4) a dependable water supply be provided to lands in the Carson Valley, California, as well as to those in the same valley in Nevada; (5) Lake Tahoe storage be controlled to solve the problems of lake shore property owners with regard to lake levels which would cause property damage; (6) adequate operation provisions be included to maintain fish and wildlife and protect migrating deer.

The Department of the Army, Corps of Engineers, finds that \$6,400 of the \$288,900 annual flood control benefits consist of secondary benefits comparable to indirect irrigation and drainage benefits and suggests that final allocation be based only on direct flood control benefits.

The Department of Agriculture comments on the high Federal investment of \$851 per irrigated acre. It estimates that the Treasury would recover about 26 percent of its investment in irrigation and drainage, including interest at 2.5 percent over 50 years, and about 69.5 percent of its total project investment, with interest at 2.5 percent during a total repayment period of 65 years. The Department questions whether the value of power should not be based upon an interest rate comparable to that used for the project (2.5 percent). The alternate power source costs as used in the report average 11.8 mills per kilowatt-hour which is higher than the current rate for power sales in the area (shown as 9.8 mills in the report). The Department also questions the soundness of basing benefits on assumed full use of water.

The Federal Power Commission, on the basis of equivalent amounts of power from a modern privately-financed steam-electric plant, estimates the value of power to be \$32 per kilowatt per year for capacity and 5.0 mills per kilowatt-hour for energy which would result in a benefit-cost ratio, for power, of 1.05. This would appear to indicate that the financial feasibility of the power plants may be marginal. The Commission also states that inflow into the

existing Federal Boca Reservoir would be reduced 50 percent and questions why this impairment should not be charged as an additional cost of the project.

The Bureau of the Budget believes that, where repayments from irrigation beneficiaries together with any net revenues of any other purposes are insufficient to provide full repayment of irrigation costs within 50 years, the report should propose authorization subject to (1) identification of the initial investment costs which are in excess of the sum of the anticipated repayments within 50 years, exclusive of permissible development periods; (2) the condition that such excess initial investment costs be borne by the Federal Government as a contribution to irrigation; and (3) the inclusion in the letter of transmittal to the Congress of proposed authorizing language stating the amount and composition of such contribution.

The Bureau of the Budget also believes that where proposed recreational facilities are not of national significance, as in the case of the Washoe project, they should not be included in the project report unless States and local governments agree to repay the costs. However, such minimum basic facilities and services, as may be needed for the general protection and operation of the project area and for the accommodation or protection of the visiting public, should be considered necessary adjuncts to construction and operation, and their costs should be allocated to the major purposes of the project.

With respect to fish and wildlife, the benefits of which the report states are conditional and not evaluated and the preservation and propagation of which the Commissioner states is one of the project purposes and will be assured to the greatest extent possible, the Bureau of the Budget has the following comment. We believe that the costs for correcting damages to fish and wildlife caused by the project should be treated as part of the construction costs and allocated to the various purposes in the same manner as other damages, including relocations. To the extent that the works to be provided are in the nature of an expansion of the fish and wildlife resources of the area they would fall into either of two classes. On those of a purely local nature the cost should be fully reimbursed by States, local governments or local interests. If of national significance they should be authorized and financed as a part of the regular fish and wildlife program or authorizing language should be submitted to the Congress stating the maximum amount of such costs which would be borne by the Federal Government.

The report includes estimates of secondary benefits without which the benefit-cost ratio of the project would be only slightly greater than unity. However, there is no provision for recapturing the costs of providing these benefits. It is believed that consideration should be given to a requirement for the establishment of conservancy districts as a means of insuring maximum justifiable contribution or repayment by those to whom the secondary benefits will accrue.

In view of the essential requirements of a firm water supply, it would seem appropriate that any authorization should be made

contingent upon a complete determination and division of available water supplies, through agreements, compacts, or otherwise, that are acceptable to the Secretary of the Interior as regards the Washoe project.

Accordingly, you are advised that, (1) subject to your consideration of the above comments, there would be no objection to the submission of your report to the Congress, and (2) we would recommend that any legislation authorizing the proposed project incorporate the conditions set forth above concerning the Federal contribution to irrigation costs, provision of recreational and fish and wildlife facilities and the establishment of a conservancy district. No commitment, however, can be made at this time as to when any estimate of appropriation would be submitted for construction of the project, if authorized by the Congress, since this would be governed by the President's budgetary objectives as determined by the then prevailing fiscal situation.

It is requested that a copy of this letter be included with your report when it is submitted to the Congress.

Sincerely yours,

(Signed) DONALD R. BELCHER,
Assistant Director.

UNITED STATES DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., June 6, 1955.

Hon. SAM RAYBURN,
Speaker of the House of Representatives.

MY DEAR MR. SPEAKER: Transmitted herewith pursuant to the provisions of section 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187) are my report and findings on the Washoe Project, Nevada and California.

The report presents a plan of development for a multiple-purpose project which is economically justified and urgently needed in west-central Nevada and east-central California. Development of the project would provide needed irrigation, power, flood control, public health, recreation, and fish and wildlife benefits through regulation of streamflow and storage of snow-melt flood waters of the East Carson and Little Truckee Rivers and drainage of surplus groundwaters in some areas of the basins. The total estimated cost of the development is about \$41,600,000 on the basis of July 1954 prices.

Copies of my proposed report were transmitted to the States of Nevada and California and to the Secretary of the Army for their views and recommendations in accordance with the provisions of section 1 of the Flood Control Act of December 22, 1944 (58 Stat. 887); to the States of Nevada and California for

the views and recommendations of the head of the agency exercising administration over the wildlife resources of those States, in accordance with provisions of the Act of August 14, 1946 (60 Stat. 1080) ; and to the other interested Federal agencies for their comments in accordance with interagency agreement. Comments have been received from the States and the Federal agencies, except the Department of Commerce, to which the report was sent and copies are attached.

The report and copies of all comments were submitted to the President. A copy of the May 20, 1955, letter from Assistant Director Donald R. Belcher, Bureau of the Budget, is enclosed. Among other things, Mr. Belcher's letter expresses the beliefs of the Bureau of the Budget concerning Federal contribution to irrigation costs, provision of recreational and fish and wildlife facilities, and the establishment of a conservancy district. These comments of the Bureau of the Budget concern problems of policy related primarily to project reimbursement which, in the case of the Washoe Project, would have little effect on project feasibility regardless of the solutions adopted. Because these same problems are associated frequently with other proposed Reclamation projects the Congress may wish to consider the policy aspects of their relationship to the Washoe Project.

Sincerely yours,

(Signed) FRED G. AANDAHL,
Assistant Secretary of the Interior.

An act to authorize the Secretary of the Interior to construct, operate, and maintain the Washoe reclamation project, Nevada and California. (Act of August 1, 1956, 70 Stat. 775, Public Law 858, 84th Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the purposes of furnishing water for the irrigation of approximately fifty thousand acres of land in the Carson and Truckee River Basins, Nevada and California, providing drainage service to approximately thirty-one thousand acres of land therein, firming the existing water supplies of lands under the Truckee River storage project and the Newlands project, controlling floods, providing hydroelectric power, development of fish and wildlife resources, and for other beneficial purposes, the Secretary of the Interior is authorized to construct, operate, and maintain the Washoe reclamation project consisting of two principal reservoirs at the Stampede and Watasheamu sites, together with other necessary works for the impounding, diversion, and the delivery of water, the generation and transmission of hydroelectric power, and the drainage of lands. The dam at the Stampede site shall be so constructed as to permit its ultimate enlargement to a height at which the reservoir will have a capacity of approximately one hundred and seventy-five thousand acre-feet.

SEC. 2. (a) In constructing, operating, and maintaining the works authorized in section 1 of this Act, the Secretary shall be

governed by the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 389, and Acts amendatory thereof or supplementary thereto) except as is otherwise provided in this Act.

(b) Any contract entered into under section 9, subsection (d) of the Reclamation Project Act of 1939 (53 Stat. 1187, 1193; 43 U. S. C., 1952 edition, sec. 458h) for payment of those portions of the costs of constructing, operating, and maintaining the Washoe reclamation project which are properly allocable to irrigation and drainage and which are assigned to be paid by the contracting organization may provide for the repayment of the portion of the construction cost of the project assigned to any project contract unit or, if the contract unit be divided into two or more irrigation or drainage blocks, to any such block over a period of not more than fifty years, exclusive of any permissible development period, or as near thereto as is consistent with the adoption and operation of a variable payment formula which, being based on full repayment within the period stated under normal conditions, permits variance in the required annual payments in the light of economic factors pertinent to the ability of the organization to pay: *Provided*, That any contract for a supplemental water supply for irrigation under this Act may omit provisions complying with the third sentence of paragraph (a) of section 46 of the Act of May 25, 1926 (44 Stat. 649) if such contract, in lieu of such provisions, provides that the pro rata share of the irrigation allocation which is attributable to furnishing irrigation benefits, in each particular year, to land held in private ownership by any one owner in excess of one hundred and sixty irrigated acres, shall be returned with interest determined in accordance with subparagraph (c) of this section, except that such payment for the excess lands shall not exceed an amount equal to the increased payment capacity of the excess lands, as determined by the Secretary of the Interior, resulting from the supplemental water supply.

(c) Notwithstanding any other provision of law to the contrary, all net revenues derived from the sale of commercial power from the Washoe reclamation project shall be applied, first, to the amortization of that portion of the cost of constructing the project which is allocated to commercial power with interest on the unamortized balance thereof at the average rate (which rate shall be certified by the Secretary of the Treasury) paid by the United States on its marketable long-term securities outstanding on the date of this Act, and thereafter to the amortization of that portion of the cost of constructing the project which is allocated to irrigation but which is beyond the ability of the contracting irrigation organizations to repay as provided above, including interest that would have been paid by the irrigators on that portion of the irrigation allocation attributable to furnishing irrigation benefits to excess lands which is not repaid under section 2 (b) above: *Provided*, That the Secretary, prior to the delivery of project water supplies, shall have entered into a contract or contracts with an organization or organizations as defined in paragraph 2 (g) of the Reclamation Project Act of 1939 (53 Stat. 1187) which have the capacity to levy assessments upon

all taxable real property located within their boundaries to assist in making repayments.

(d) Water users in Alpine County, California, shall have the opportunity to contract for project water made available by the Watasheamu Reservoir before such project water is offered for the development of any new land in Nevada. Should any such project water be contracted for by Alpine County water users, then in that event such users shall be permitted to exchange such water for existing rights to natural flow or stored water of the West Carson River.

(e) The use of waters of the Little Truckee River solely for the generation of electric power by the Washoe project shall not impair or preclude the appropriation of such waters in the future for beneficial consumptive use within the Little Truckee River watershed in California to the same extent as such waters may be presently available for such appropriation in the State of California: *Provided*, That if and when an interstate compact covering the distribution and use of the waters of the Truckee and Carson Rivers is approved by the Legislatures of the States of California and Nevada and is consented to by Congress, the operation of the Washoe reclamation project shall be in conformance with such compact, and the foregoing restriction shall not apply.

SEC. 3. The Secretary is authorized to investigate, plan, construct, operate, and maintain minimum basic facilities for access to, and for the maintenance of public health and safety and the protection of public property on, lands withdrawn or acquired for the development of the Washoe project, to conserve the scenery and natural, historic, and archeologic objects, and to provide for public use and enjoyment of the same and of the water areas created by this project by such means as are consistent with its primary purposes. The Secretary is authorized to withdraw from entry or other disposition under the public land laws such public lands as are necessary for the construction, operation, and maintenance of said minimum basic facilities and for the other purposes specified in this section and to dispose of such lands to Federal, State, and local governmental agencies by lease, transfer, exchange, or conveyance upon such terms and conditions as will best promote their development and operation in the public interest. The Secretary is further authorized to investigate the need for acquiring other lands for said purposes and to report thereon to the Committees on Interior and Insular Affairs of the Senate and House of Representatives, but no lands shall be acquired solely for any of these purposes other than access to project lands and the maintenance of public health and safety and the protection of public property thereon without further authorization by the Congress. All costs incurred pursuant to this section shall be non-reimbursable and nonreturnable.

SEC. 4. Facilities shall be provided for the development of the fish and wildlife resources of the project area including facilities to permit increased minimum water releases from Lake Tahoe and restoration of the Pyramid Lake fishery. The cost of such facilities, including operation and maintenance, shall be nonreimbursable. The cost to the Federal Government of constructing

these facilities shall not exceed \$2,000,000. This amount shall not include the cost of measures undertaken, pursuant to section 2 of the Act of August 14, 1946 (60 Stat. 1080, 16 U. S. C. 661a), to mitigate damages to fish and wildlife resources occasioned by the Washoe project as authorized by section 1 of this Act.

SEC. 5. There is hereby authorized to be appropriated for construction of the Washoe reclamation project the sum of \$43,700,000 plus such amounts, if any, as may be required by reason of changes in construction costs as indicated by engineering cost indices applicable to the types of construction involved therein and, in addition thereto, such sums as may be required to operate and maintain the project: *Provided*, That the appropriation of funds for the construction, operation, or maintenance of facilities authorized by section 4 of this Act shall not be from the reclamation fund.

WEBER BASIN PROJECT

UTAH

The report covering the feasibility of the Weber Basin project is contained in Senate Document No. 147, 81st Congress, 2d Session. The project was approved by the Act of August 29, 1949 (63 Stat. 677).

(Extract from Senate Document No. 147, 81st Cong., 2d sess.)

REPORT OF THE REGIONAL DIRECTOR

UNITED STATES DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Region 4, Salt Lake City 8, Utah, July 15, 1949.

To: Commissioner.
From: Regional director.
Subject: Development of the potential Weber Basin project,
Utah—Bonneville Basin.

1. This is my report on the potential Weber Basin project, a multiple-purpose development designed for maximum utilization of the water and related resources of a rapidly growing section of north central Utah. The report is submitted for your approval and appropriate departmental action with a view to securing congressional authorization of the project for immediate start of development. Substantiating materials, including reports of the Bureau of Reclamation, National Park Service, Fish and Wildlife Service, and Public Health Service, are appended.

2. Authority to make this report and supporting investigations is provided in the Federal reclamation laws (act of June 17, 1902, 32 Stat. 388, and acts amendatory thereof or supplementary thereto).

DESCRIPTION OF THE AREA

3. The Weber Basin area, a part of the Bonneville Basin, covers approximately 2,500 square miles, 3 percent of the State of Utah. Great Salt Lake forms the western boundary of the area and the north, east, and south boundaries are the divides between the basin and the Bear, Provo, and Jordan River drainages, respectively. Elevations range from 11,900 feet (the highest mountain peak) to 4,200 feet on the shores of Great Salt Lake. From its headwaters on the northwest slope of the Uinta Mountains, the Weber River flows some 40 miles northwesterly between the Uinta and Wasatch Mountains and then turns west, cutting a channel through the Wasatch Mountains in their most rugged part to discharge into Great Salt Lake. Ogden River, the Weber's principal tributary, heads in the southern end of the Bear River Mountains and flows westerly, also cutting through the Wasatch Range, to its confluence with Weber River immediately west of Ogden, Utah. In addition to streams in the Weber River system, the area includes many small, deeply engorged streams draining the steep west slope of the Wasatch Mountains and discharging directly into Great Salt Lake.

4. The narrow strip of land between the mountains and Great Salt Lake slopes gently from the foothills to the lake and consists generally of terraced benches and deltalike areas that were formed during the various cycles of inundation and recession of prehistoric Lake Bonneville, the ancestral lake to the present Great Salt Lake. Here is concentrated the major part of the agricultural and industrial development of the Weber Basin area and about 90 percent of its population. To the east is a mountainous area (utilized primarily for grazing) containing some narrow tracts of cultivated lands situated in the mountain stream valleys and on adjacent benches. Irrigated and irrigable lands range in elevation from 4,200 to 5,000 feet bordering Great Salt Lake and up to 7,000 feet in the mountain valleys.

5. The climate is temperate and semiarid with a low relative humidity. Precipitation is erratic, averaging 17 to 20 inches annually on the agricultural lands throughout the area. Less than one-third of the precipitation occurs during the growing season. Thus irrigation is necessary for sustained and successful crop production. Lands in the mountain areas above an elevation of 8,000 feet have a rigorous alpine climate. Here the precipitation averages more than 20 inches annually and snow accumulates to considerable depth during the winter season.

6. Near the turn of the century all stream flow in the area, except spring flood flows, was appropriated. Much of the irrigated farm land suffered water shortages in the summer season and total crop failures were experienced in drought years. To reduce the irrigation shortages East Canyon Reservoir was developed in 1896 (subsequently enlarged in 1916), Echo Reservoir in 1929, and Pineview Reservoir in 1936. The three reservoirs, together

with several small additional reservoirs, have a combined storage capacity of about 150,000 acre-feet and were developed primarily for the purpose of supplementing water supplies for lands inadequately irrigated from direct flows. Very little new land was brought under irrigation. Echo Reservoir and Pineview Reservoir are principal features of Federal reclamation projects.

7. The Weber Basin area is a highly developed agricultural and industrial section. Agriculture, manufacturing, transportation, oil refining, and mining are the most important industries. Agriculture consists of irrigation farming, dairying, and livestock raising. Manufacturing establishments are engaged largely in the processing of agricultural products of the immediate and surrounding area. Three large, permanent military installations—Hill Field, the Ogden Arsenal, and the naval supply depot at Clearfield—were established during World War II. Largely as a result of these establishments and increased industrialization, the population in the Weber area increased from 90,000 in 1940 to 127,000 in 1947, an increase of 37,000 or 41 percent. The 1947 population of the area represented 20 percent of the population of the State of Utah.

NEED FOR FURTHER DEVELOPMENT OF WATER AND LAND RESOURCES

8. Construction of facilities to regulate and distribute surplus stream flows for irrigation and municipal use is the greatest need of the Weber Basin area. Natural stream flows are erratic and fluctuate widely from season to season and from year to year. The flows are high in the spring when accumulated snow in the mountains is melting but are at low stage the remainder of the year. Present water-resource developments utilize an average of 60 percent of the total stream flow. The remaining 40 percent is unregulated and causes flood damage in the spring season along the lower reaches of Weber and Ogden Rivers. Only with additional storage regulation and distribution works can the maximum practicable development of this wasting resource be realized. State and local officials have long recognized the need of such development, but the works required are too large and costly for private financing.

9. Urgent need now exists for irrigation expansion. The rapidly growing population of the Weber Basin area, as well as much of the western United States, has greatly increased the demands for locally produced foods and other agricultural products and for settlement opportunities on farms. At the same time more than one-fourth of the total area presently irrigated requires supplemental water. Large acreages of land suitable for irrigation farming have not been developed for lack of water and irrigation facilities. Thousands of acres in need of a full or supplemental water supply require drainage for full productivity.

10. Even greater need exists for increasing dependable sup-

plies of municipal water. Population increases far beyond the growth anticipated a decade ago have overtaxed present municipal supplies. Only the above normal precipitation during the past few years has prevented serious shortages. With recurrence of extended periods of below normal precipitation and particularly of extreme drought years, the situation would be critical.

11. Additional electric power is needed to supply growing requirements. Electric generating capacity installed by electric utilities and industrial plants serving the area and surrounding region is sufficient only to meet the immediate needs. Continued rapid load growth is expected in the future. To keep pace with this growth utilities are currently planning extensive installation of new fuel-electric generating plants.

PLAN OF DEVELOPMENT

12. The Weber Basin project is designed to develop the basin's remaining water resources for agriculture and municipalities, both dependent on the available water supply. By further storage regulation of the fluctuating flows of Weber River, more effective utilization of natural flows from Wasatch slope streams, and development of usable return flows and ground water, the project would increase the useful water supply of the area at canal heads by an average total of 285,000 acre-feet annually. Of this total supply, 245,000 acre-feet would be utilized for irrigation and 40,000 acre-feet would be used for municipal purposes in communities in Davis and Weber Counties. The irrigation water would provide a full-season supply for 100,400 acres, including 70,400 acres of potentially productive lands now unirrigated and approximately 30,000 acres now only partially productive because of irrigation shortages. Through drainage, the project would make suitable for irrigation farming 31,700 acres of the 70,400 acres of new land and would increase the productivity of 7,000 acres of the 30,000 acres now inadequately irrigated. Flood damage along the Weber and Ogden Rivers would be materially reduced by the storage regulation and canal diversion of flood flows. The amount of hydroelectric energy that would be generated annually by the project would only slightly exceed the project's electric-energy requirements for pumping during the irrigation season. The project would increase recreational values in the area. Results of a reconnaissance study of fish and wildlife aspects of the project indicate that the project may result in a benefit to fish and wildlife. Operation of the project would not further aggravate stream pollution in the area. Silt problems would be minor and navigation and Indian lands would not be involved.

13. The basic plan for the development includes the further regulation of the flows of the Weber River by means of a system of upstream reservoirs and an offstream reservoir at the Willard site on the east shore of Great Salt Lake. As regulated by the upstream reservoirs, the stream flow would meet the irrigation and municipal requirements of the high-level lands (those lands lying above the service area of the Willard Reservoir) and a

portion of the requirements of the low-level lands (those lands within the service area of the Willard Reservoir). Flows not regulated upstream, consisting of a relatively large portion of the total stream flow, would be diverted from Weber River at a point common with the lowest existing diversion and stored at the Willard Reservoir. Water would be pumped from the reservoir as needed to meet the remaining irrigation requirements of the low-level lands.

14. The required stream-flow regulation would be provided by five new reservoirs and enlargement of an existing reservoir. In all, 418,000 acre-feet of new storage capacity, as shown in the following table, would be provided:

Reservoir	Location	Capacity (acre-feet)
Perdue	Weber River	50,000
Lost Creek	Lost Creek	20,000
Jeremy	East Canyon Creek	35,000
Magpie	South Fork of Ogden River	60,000
Pineview (enlargement)	Ogden River	48,000
Willard	Shore of Great Salt Lake	205,000
Total reservoir storage capacity		418,000

15. The delivery of water to the high-level lands would require three new conveyance systems; namely, the Eden Canal and the Weber and Davis aqueducts. The Eden Canal would divert from the South Fork of Ogden River below the Magpie Reservoir and extend 5 miles to the northwest to serve lands in Ogden Valley with new and supplemental water. The Weber Aqueduct, 19 miles in length would divert from Weber River at the Stoddard diversion dam about 4 miles below Morgan, Utah, and would extend along the south side of Weber Canyon to its mouth. Here the aqueduct would siphon across the canyon and extend northward a short distance onto benchlands south of Ogden. This aqueduct would convey irrigation water to the benchlands north of the river and municipal water for use in Ogden and vicinity. The Davis Aqueduct would divert from the Weber Aqueduct at the mouth of Weber Canyon and extend 23 miles along the foothills of the Wasatch Mountains to the south end of the area. In addition to supplying a portion of the lands south of Weber River with irrigation water, the Davis Aqueduct would also convey water for the municipalities along its course. Where practicable it would also intercept and divert a portion of the surplus spring season flows of several of the Wasatch slope streams. Arable benchlands lying adjacent to and above the Weber and Davis Aqueducts would be served with water as required by pumping from these aqueducts.

16. Furnishing water to the low-level lands would require three new main canals—the Willard gravity, the Willard pump, and the Layton Canals—the Slaterville and Ogden diversion dams, and the Willard and Layton pumping plants. With the exception of occa-

sional peak discharges, all flows of Weber River not used upstream would be diverted by the Slaterville diversion dam a short distance below the mouth of Ogden River and conveyed 11.5 miles northward through the Willard gravity canal to Willard Reservoir. Water from the reservoir would be pumped to the Willard pump canal. This canal, extending 11.5 miles south from the Willard Reservoir to Weber River, would serve the low-level lands. The Layton Canal would divert from Weber River at the Ogden diversion dam and extend 20 miles south to a point near Kaysville, Utah. The water supply for this canal would be obtained from available flow of the Weber River supplemented by Willard Reservoir water. The reservoir water would be lifted 20 feet to the canal from the Willard pump canal at the Layton pumping plant.

17. Distribution of irrigation water from the main canals and aqueducts would be made through existing irrigation systems where practicable. Enlargements and extension of the existing systems would be undertaken where necessary and new main lateral systems constructed where needed. Facilities for treatment of the municipal water and for its distribution beyond the turn-out points along the Weber and Davis aqueducts would be provided by the water users' organization and municipalities through local financing.

18. Hydroelectric energy would be generated at the Magpie and Perdue power plants that would be located at the Magpie and Perdue Dams.¹ These plants would have a total installed generating capacity of 6,000 kilowatts, 3,000 kilowatts each, and would operate under average heads of 210 and 190 feet. Average annual energy production would amount to 28,400,000 kilowatt-hours. These plants would be interconnected with the power system of the Utah Power & Light Co., by constructing 25 miles of transmission lines. Energy produced by the plants would be utilized at the project pumping plants. Additional pumping energy required during the irrigation season would be obtained from the power company through exchange of energy produced by the project in the nonirrigation season. The small amount of power that would be produced by the project in excess of pumping and exchange requirements would be available for sale on a nonfirm basis. The Bureau of Reclamation would retain ownership and operate the hydroelectric plants constructed as part of the project.

19. Project operation would affect the flows available to three existing hydroelectric power plants of the Utah Power & Light Co. The net effect on the company's Pioneer plant on Ogden River would be an average increase in production of about 3,000,000 kilowatt-hours annually. Changes in production at the company's Weber plant on the Weber River would be negligible and production at the Riverdale Plant on the same stream would be decreased approximately 5,000,000 kilowatt-hours annually. Under

¹ The potential Gateway power plant on Weber River shown on the general map is not included in the present project plan.

the present tentative plan the power company would be charged on an annual basis for the increase in production at its Pioneer plant and would be reimbursed by a lump-sum settlement for the loss in power at its Riverdale plant.

20. A system of approximately 115 miles of open drainage channels and wasteways would be provided to reclaim and make suitable for productive irrigation farming those waterlogged lands susceptible of drainage. This system would also drain some presently irrigated land having impaired productivity because of a high water table and would protect other farm lands against seepage resulting from the increased water application of the high-level lands.

21. As recommended by the National Park Service in its report, recreation facilities would be built at most of the reservoirs as part of the project development. These facilities would include access roads, camping and parking areas, boating and picnicking facilities, beach development, landscaping, and sanitary and other service utilities. Additional related recreational facilities such as lodges and appurtenances, bathhouses, and group camps would be constructed, operated, and maintained by private interests under the general administration of a public agency.

22. Operation of the project to maintain certain stream flows and provision for facilities for the conservation and enhancement of fish and wildlife, in accordance with the future findings and recommendations of the Fish and Wildlife Service, would be undertaken where justified.

23. An 11-year period is expected to be required for project construction following 1 year required for detailed preconstruction investigations. Construction of project features would follow a schedule designed to make separate blocks of irrigation and municipal water available for use in about the fifth, ninth, and twelfth years after the start of construction. The first block of water would meet the urgent municipal needs and would provide a portion of the required supplemental irrigation water. Initial construction would include the Perdue Reservoir and enlargement of Pineview Reservoir, the Weber and Davis aqueducts, the Stoddard and Slaterville diversion dams, and some laterals. Construction of the other project features would be initiated and completed as required to make available the remaining blocks of project water and to provide the project pumping energy and land drainage as needed.

24. The basic plan of comprehensive development discussed herein is sound and was selected as a means for maximum development of the water and land resources of the area after consideration of several possible alternatives. Some modifications in details of the plan may yet evolve during the course of detailed preconstruction investigations leading to the preparation of final plan report. Any such modification, however, would be expected to enhance the economy of the project.

WATER SUPPLY

25. Simulated operations of the project, based on stream-flow records over the 20-year period 1928 to 1947, show that with hold-over of storable water an adequate water supply would be physically available for the project as planned. In the simulated project operation municipal water requirements were considered a preferential use and were fully met throughout the 20-year period of study. Only minor irrigation shortages of less than 10 percent would have occurred in the dry years of 1931, 1934, and 1935, included in the study period.

26. An appraisal of the water-right situation in the Weber Basin area indicates that adequate water rights could be obtained in accordance with the Utah State water law for the project as planned. To protect the public interest in the potential development, the Governor of the State of Utah has formally withdrawn the surface and ground waters of the Weber Basin area from further appropriation pending authorization and construction of the project. Many water exchanges with owners of existing rights to the use of waters of the Weber Basin area, particularly between low-level and high-level lands, would be necessary to permit the successful operation of the project. Such exchanges are expressly authorized by Utah law.

PROJECT WORKS AND COSTS

27. The capital cost of the project features and appurtenant structures expected to be financed through Federal funds is estimated at \$69,534,000 on the basis of January 1949 prices. This estimate includes costs for construction, engineering, overhead, rights-of-way, contingencies, and investigations and surveys. Annual operation and maintenance costs of project features, including costs of producing electric energy for pumping, are estimated to average \$275,000. They are expected to provide for proper operation and maintenance and sufficient replacement to assure the project works a useful life of 100 years or more. The annual costs, except those of power and pumping features, are based on average 1939-44 prices believed to be indicative of average prices over an extended period in the future. Annual costs for power and pumping features are based on January 1949 prices. Project features and their estimated costs are summarized in the following tabulation:

Summary of project costs

Project feature	January 1949 construction cost	Annual opera- tion, mainte- nance, and replacement reserve cost
Dams and reservoirs:		
Perdue.....	\$9,400,000	\$6,000
Enlarged Pineview.....	2,425,000	4,000
Jeremy.....	3,410,000	5,000
Lost Creek.....	3,550,000	5,000
Magpie.....	9,350,000	6,000
Willard.....	10,940,000	4,000
Subtotal.....	39,075,000	30,000
Diversion dams:		
Stoddard.....	300,000	900
Ogden.....	290,000	700
Slaterville.....	350,000	900
Huntsville.....	70,000	300
Subtotal.....	1,010,000	2,800
Aqueducts and canals:		
Weber aqueduct.....	7,000,000	4,800
Davis aqueduct.....	9,800,000	5,300
Layton canal.....	700,000	4,700
Willard gravity canal.....	700,000	8,300
Willard pump canal.....	900,000	6,000
Eden canal.....	160,000	1,200
Subtotal.....	19,260,000	30,300
Power plants:		
Perdue.....	684,000	41,100
Magpie.....	692,000	41,800
Subtotal.....	1,376,000	82,900
Pumping plants:		
Davis.....	490,000	13,200
Weber.....	180,000	6,900
Willard.....	1,460,000	35,600
Layton.....	190,000	7,000
Subtotal.....	2,320,000	62,700
Miscellaneous:		
Drainage system.....	3,000,000	17,000
Lateral system.....	1,400,000	5,000
Ground-water pumping.....	300,000	3,000
Davis County storage charge ¹	181,000	
Compensation to Utah Power & Light Co., for reduction in power output at Riverdale plant.....	290,000	
Operation and maintenance during construction	360,000	
Investigations and surveys ²	330,000	
Recreational facilities ³	632,000	41,300
Subtotal.....	6,493,000	66,300
Total	69,534,000	275,000

¹ For acquisition of rights to 5,000 acre-feet of water in Echo Reservoir now contracted for by Davis County.

² Includes only reimbursable costs of investigations and surveys to June 30, 1949. Costs of preconstruction surveys are prorated among the costs of project facilities.

³ Includes only Federal costs of recreational development. An additional amount of about \$550,000 would be expended for recreational developments by private interests.

COST ALLOCATIONS

28. The project costs are tentatively allocated to the various purposes as shown in the following tabulation. The allocation to flood control represents the present value of estimated benefits from this purpose over a 100-year period with an interest rate of

2.5 percent. The total allocation to recreation is the sum of the costs of the specific recreational facilities plus an equivalent amount of the joint costs of the project reservoirs (including capital and annual costs) less the non-Federal costs. No allocation was made to power since the sole purpose of the proposed power features of the project is to provide irrigation pumping energy and any incidental energy sales would be surplus to these requirements. Costs of project facilities used for one purpose only were allocated to that purpose. Costs of joint use facilities were allotted to irrigation and municipal water in accordance with the proportionate use of those facilities. The allocation to flood control and any costs found properly allocable to fish and wildlife would be nonreimbursable in accordance with present law. Because recreational benefits resulting from construction of the project are national in scope the allocation to recreation would be expected to be made nonreimbursable by authorization of the project. Allocations to irrigation and municipal water would be reimbursable.

Allocation of costs

	Construction costs	Annual operation and maintenance costs ¹
Reimbursable:		
Irrigation.....	\$40,234,000	\$212,300
Municipal water.....	18,744,000	21,400
Subtotal.....	58,978,000	233,700
Nonreimbursable:		
Flood control.....	5,900,000	
Recreation.....	4,656,000	41,300
Subtotal.....	10,556,000	41,300
Total.....	69,534,000	275,000

¹ Includes replacement costs.

REIMBURSEMENTS

29. Estimated project revenues from irrigation, municipal water, and power would be sufficient to pay the reimbursable capital costs in 60 years after water users in the last irrigation block began payments on capital costs. Payments would begin at different times in the various areas under the project since lands and communities would be served water in three blocks on completion of the various project works. After starting payments, however, water users would pay continuously for 60 years on each block of water. A development period averaging 5 years after the delivery of project water and before the assessment of capital costs would be desirable for each irrigation block in order that the irrigators could improve their lands and realize benefits from project water at the time assessments were started.

30. Construction charges are expected to be distributed equitably among the project lands consonant with the variable quanti-

ties of water and benefits they would receive from the project and their ability to pay. The actual distribution of irrigation charges would be resolved in preconstruction investigations and negotiations with the water users and the contracting organization. The estimated annual installments that could be made by irrigators after payment of operation and maintenance costs are shown below. The estimates are made for various land categories and kinds of farms.

Area and type of farming	Acres	Total acre-feet	Annual operation and maintenance cost per acre-foot	Annual installment	
				Per acre-foot	Area total
Foothill: Fruit-truck crop.....	26,600	58,800	\$0.91	\$3.15	\$185,200
Benchlands: Dairy cash crop.....	29,000	67,800	.91	1.94	131,500
Delta: Dairy cash crop.....	31,700	95,100	.91	1.72	163,600
Mountain valleys: Dairy field crop.....	13,100	23,300	.47	.92	21,400
Project total.....	100,400	245,000	-----	-----	501,700

31. On the basis of the estimated payments, irrigators each year could pay their allocation of the operation, maintenance, and replacement costs, estimated at \$212,300, and could pay \$501,700 toward their allocation of capital costs. Thus in a 60-year period they could pay a total of \$30,102,000 toward the construction cost allocation of \$40,234,000. The balance of \$10,132,000 could be paid from power revenues and revenues paid by the municipal water users after retirement of the municipal allocation.

32. Municipalities would be required to pay for water at a rate sufficient to pay in 40 years without interest that part of the project cost properly allocable to municipal use. Although no interest is charged, annual payments by the municipal users would be continued after retirement of the allocation so that they would pay for the same length of time as any irrigation block. In the estimated 60-year repayment period, they would thus return to the Government \$9,372,000 over and above the allocation to municipal water for use in paying a portion of the irrigation allocation. The annual rate for the 40,000 acre-feet of municipal water would amount to \$490,000 or \$12.26 an acre-foot. Of this amount, \$21,400 or \$0.54 an acre-foot would be required for operation, maintenance, and replacements and \$468,600 or \$11.72 an acre-foot would be available to apply on the allocation of capital cost. Additional costs of treatment plants and extensive pipe lines to convey water from the project aqueducts to the regulation or distribution systems of the municipalities would be financed by the water users' organization. The temporary organization of the municipalities in a report by its consulting engineer has estimated these additional costs to be from \$15 to \$20 an acre-foot.

33. Revenues from sale of the small block of nonfirm electric energy that would be produced by the project in excess of the project pumping and exchange needs would amount to approximately \$15,000 annually. Revenues from the increased water sup-

ply that would be made available at the Pioneer power plant of the Utah Power & Light Co., would amount to approximately \$9,000 annually. Total power revenues, with allowances made for variable returns during the construction period, would amount to \$1,626,000 during the entire period of repayment.

34. Revenues available during the repayment period toward payment of the reimbursable capital costs are summarized below.

Irrigation water	\$30,102,000
Municipal water	28,116,000
Power	<u>1,626,000</u>
Total	59,844,000

BENEFITS AND COSTS

35. Measurable benefits from the project attributable to Federal costs would compare with the costs in a ratio of 3.35 to 1, indicating that an economic value of approximately \$3.35 would result from each Federal dollar expended for the development. The ratio of benefits to costs was determined by considering both the benefits and costs on the basis of average annual equivalents over the same 100-year period (beginning the year the first block of project water would be available). Annual benefits and costs were computed at a 2.5 interest rate and were adjusted to allow for the construction and development periods. The annual value was thus determined as \$6,995,500 and the annual cost of \$2,088,400.

36. The \$6,995,500 annual benefit value represents a value of \$5,979,000 from increased irrigation that would be brought about by project development, \$636,000 from municipal water, \$161,000 from flood control, \$168,500 from recreation, and \$51,000 from power. The equivalent average annual cost of \$2,088,400 includes annual operation and maintenance costs and the annual amount required to amortize the capital cost over a 100-year period.

37. Construction costs used in the analysis are estimated at current high prices, while benefits are based on average 1939-44 prices. Future variations in these price levels may result in a substantially different benefit-cost ratio than is indicated by the analysis as the actual ratio would depend largely on the relationship between actual costs at the time of construction and the average prices prevailing throughout the long useful life of the project.

PARTICIPATION BY OTHER AGENCIES

38. The National Park Service has reviewed the project plan. In its report it has appraised the potential recreational values of project reservoirs and has recommended that certain recreational developments be undertaken as part of the project. The Bureau of Reclamation is in general accord with the recommendations of the Service.

39. The Fish and Wildlife Service has briefly reviewed the project plan and made a reconnaissance survey of the fish and

wildlife aspects of the area. The Service concluded that further investigations would be necessary to obtain the detailed information required for full consideration of the fish and wildlife aspects of the project and for the formulation of specific recommendations. The necessary investigations by the Service are now in progress and can be completed during the course of other detailed preconstruction investigations of the project.

40. The United States Public Health Service conducted a sanitary survey of the Weber Basin area to evaluate public-health problems that would be encountered in connection with the development of the project. The Service recommends that sanitary facilities at all recreational and construction camp areas be installed in accordance with accepted sanitary standards, that wastes from existing and proposed sewerage systems in the Weber Basin be adequately treated prior to their discharge into the Weber River and its tributaries, and that the purification plants for treating project municipal water be provided. The Bureau of Reclamation is in general accord with these recommendations.

41. Data on flood damages and magnitude and frequency of floods in the Weber and Ogden Rivers were compiled by the Corps of Engineers, United States Army, and were used as the basis for evaluating the effects the Weber Basin project would have on prevention of flood damages.

ACKNOWLEDGMENTS

42. Work of the investigation has been carried on by the Bureau of Reclamation with funds appropriated by Congress and funds contributed by the State of Utah. Several Federal, State, and local governmental agencies and local interests, aside from the agencies participating directly in the investigation, have supplied helpful information and data. Free use has been made of applicable information in previous reports on investigations and studies related to development and resources of the area.

CONCLUSIONS

43. The multiple-purpose Weber Basin project outlined in this report is a practicable means for maximum utilization of the area's water and land resources. Its early development is highly desirable to meet the pressing needs of the area. The basic plan of comprehensive development discussed in this report is sound. Some modifications in details of the plan may yet evolve during the course of detailed preconstruction investigations required for a final plan report. Any such modifications, however, would be expected to enhance the economy of the project. No unusual construction or design problems would be involved. An adequate water right for the project could be obtained in accordance with Utah water law.

44. The preliminary estimates show the project to be economically justified on the basis of national benefits and costs, its benefits comparing with its costs in the ratio of 3.35 to 1. The reimbursable capital cost of the project allocable to irrigation and

municipal water could be repaid in approximately 60 years following appropriate development periods for project lands. A water-conservancy district organized in accordance with Utah law would be the most suitable organization to represent the water users and to contract with the United States for repayment of reimbursable costs. Satisfactory repayment contracts with water users' organizations and a suitable contract with the power company should be consummated prior to commencement of construction of the project.

RECOMMENDATIONS

45. It is recommended:

(1) That the basic plan of development of the potential Weber Basin project as described in this report be approved;

(2) That the project features listed in paragraph 27 hereof and such related works as may be incidental thereto, constituting the Weber Basin project in the Bonneville Basin in Utah, be authorized to be constructed, operated, and maintained by the Bureau of Reclamation in accordance with Federal reclamation law (act of June 17, 1902, 32 Stat. 388, and acts amendatory thereof or supplementary thereto), and substantially in accordance with the plans set forth in the report with such modifications, omissions, or additions to the works as the Commissioner of Reclamation, with approval of the Secretary of the Interior (hereinafter called the Secretary), may find proper and necessary for carrying out the purpose of the project:

Provided,

(a) That the Secretary, upon consideration of all appropriate factors, shall determine the parts of the project's construction and annual operation and maintenance costs which can properly be allocated to flood control, recreation, and preservation and propagation of fish and wildlife and be non-reimbursable and also the parts of the project's capital costs which can properly be allocated to irrigation and municipal water and be reimbursable;

(b) That the repayment of reimbursable capital costs of the project be made substantially in accordance with the plan described in paragraphs 29 to 34 hereof:

Provided further,

That the Secretary be authorized to establish a mutually satisfactory repayment plan with water users which would provide for variable annual payments.

(Signed) E. O. LARSON,
Regional Director, Region 4.

AUTHORIZATION OF WEBER BASIN PROJECT

An act to authorize the Weber Basin reclamation project, Utah. (Act of August 29, 1949, 63 Stat. 677, Public Law 273, 81st Cong., 1st sess.)

* * * That the Secretary of the Interior, through the Bureau of Reclamation, is hereby authorized to construct, operate, and maintain the Weber Basin project to consist of reservoirs, irrigation and drainage works, power plants, transmission lines, and similar works in and near Morgan, Davis, Summit, and Weber Counties, Utah, for the purposes of supplying irrigation water to lands, both new and presently irrigated; supplying municipal, industrial, and domestic water; controlling floods; and generating and selling electric energy to help meet the short supply of power in the area and as a means of making the whole project self-supporting and financially solvent; and for other beneficial purposes (including, but without limitation, the control and catchment of silt, improvement of the general quality of the water, the preservation and propagation of fish and wildlife, and the provision and improvement of recreational facilities), at an estimated cost of \$69,500,000, all in substantial accord with the recommendations made in that certain report, dated July 15, 1949, of the regional director, region IV, Bureau of Reclamation, entitled "Weber Basin project, Utah."

SEC. 2. The Secretary is authorized to apportion equitably the costs of constructing, operating, and maintaining (including therein reasonable provision for replacement) the project works herein authorized between, on the one hand, their flood control, recreational, and fish and wildlife purposes and, on the other hand, their irrigation, power, municipal, and other water-supply purposes. The former allocations shall be nonreimbursable and non-returnable. The latter allocations shall be reimbursable and returnable: *Provided*, That general repayment obligations undertaken pursuant to subsections (c) and (d) of section 9 of the Reclamation Act of 1939 may extend over a period not exceeding sixty years.

SEC. 3. As a condition precedent to construction of any of the irrigation or drainage works herein authorized, there shall be established an organization in the State of Utah with powers satisfactory to the Secretary, including the power to tax property both real and personal within its boundaries and the power to enter into a contract or contracts with the United States for payment of reimbursable costs allocated to irrigation, municipal water supply, and other miscellaneous purposes.

SEC. 4. This act shall be a supplement to the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto), the provisions whereof shall govern the construction, operation, and maintenance of the Weber Basin project except as otherwise herein provided.

SEC. 5. There are hereby authorized to be appropriated, out of any moneys in the Treasury not otherwise appropriated, such sums as may be required to carry out the purposes of this Act.

August 13, 1952.

MEMORANDUM

To: Secretary of the Interior.
From: Commissioner of Reclamation.
Subject: Report on the Weber Basin Project.

Attached is the report on the Weber Basin Project. It has been cleared with the various agencies of the Department with the exception of the National Park Service and the Division of Land Utilization. The National Park Service objects to the allocation to recreation. Director Wirth's memorandum to you is attached. The Division of Land Utilization also objects to the amount of the recreation allocation and, in addition, raises questions with respect to the flood control allocation and the use of the interest from municipal and industrial water sales to assist irrigation repayment. Director Muck's memorandum to you is also attached.

The procedure used in arriving at the recreation allocation is the same as that followed in the report on which authorization is based. The amount is somewhat more because of increased costs which are the basis for the recreational benefits. However, the amount of \$6,391,000 allocated to recreation is well within the benefits figure of \$10,074,600 furnished us by the National Park Service.

This allocation was discussed at a meeting on October 5, 1951, with the National Park Service. The Park Service was advised at that meeting as to the approximate amount of the recreation allocation, and it was agreed that the Park Service would assume responsibility for defending the evaluations of recreational benefits and the Bureau of Reclamation would assume the responsibility for defending the allocation.

I take exception to Director Wirth's statement that recreation is not one of the real and valid purposes of the project. Recreation is proposed in the report and listed by the Congress in the authorizing act as one of the project purposes and an allocation of a portion of the project cost to recreation is specifically authorized in Public Law 273, 81st Congress. The Congress recognized that the Weber Basin Project would serve many purposes, including recreation, and stipulated that all purposes would share in the costs.

It occurs to us that the Department's policy should be one of pushing vigorously and pointedly the amount of recreational benefits derived from the Departmental program and a playing up of the costs which these benefits can and will support. To us, a timid and over-cautious approach in this matter will not create and sustain a desirable recreational program.

With respect to flood control, we consider that the agreement reached between our Regional office and the Sacramento District of the Corps of Engineers, on the flood control plan and the value of the project for flood control, meets the requirement set forth in the President's August 30 letter. The questions concerning the

flood control allocation, which were required to be resolved, relate to the value of the project for flood control. This has been worked out with the Corps of Engineers and a copy of their report is an enclosure to our report for transmittal to the President. The Chief of Engineers was advised with respect to the flood control allocation on July 2 and his comments invited. However, no reply has been received.

The use of interest from municipal and industrial water sales to assist irrigators in repaying costs allocated to irrigation which are beyond their ability to repay is in accordance with the Reclamation law and established Departmental policy. This procedure assures equitable municipal and industrial water rates and yet permits all project revenues to be used to repay project costs. The authorizing act provides for using all project revenues. If all revenues are not used in this fashion the project would be financially infeasible.

Funds have been appropriated to start construction of this project. We are all set to issue specifications on the first feature in September. Because of this and the foregoing factors, I recommend that you approve the report and transmit it to the President.

(Signed) MICHAEL W. STRAUS,
Commissioner.

UNITED STATES DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., August 28, 1952.

THE PRESIDENT,
The White House,
(Through the Bureau of the Budget).

MY DEAR MR. PRESIDENT: This is my report on the Weber Basin Project, Utah, submitted in compliance with your letter of August 30, 1949. My report is based on and includes the enclosed Departmental report prepared by the Commissioner of Reclamation, with contributions by the Fish and Wildlife Service and the National Park Service, which I have approved and adopted subject to the reconsideration and approval by the President of the tentative allocation to recreation.

There is enclosed also for your information a copy of the Department of Agriculture's report on the water users' ability to pay for water, including Assistant Secretary Hutchinson's letter of transmittal, and a copy of a report by the Sacramento District of the Corps of Engineers covering the flood control plan and the flood control benefits attributable to the project.

A copy of the Bureau of Reclamation's report was furnished to the Chief of Engineers on July 2 inviting his comments thereon. If additional comments are received from the Corps of Engineers they will be forwarded to you.

The actions that have been taken to meet the requirements set forth in your letter of August 30, 1949, are reflected in the field report and are summarized in the Commissioner of Reclamation's report. In this connection I respectfully request that you reconsider your direction that no allocation of cost be made to recreation and that you approve the recreation allocation tentatively proposed. Should you wish, your approval could be stated to be in recognition of all the circumstances pertaining to this particular project, with the understanding that general policy to be expressed in future water resource legislation will not be affected by such action on this project.

As the Congress has appropriated funds to initiate construction this fiscal year your early consideration of the report will be appreciated. I recommend your approval of this report.

Sincerely yours,

(Signed) JOEL D. WOLFSOHN,
Acting Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington 25, D. C., September 29, 1952.

The Honorable the SECRETARY OF THE INTERIOR.

MY DEAR MR. SECRETARY: This will acknowledge receipt of Acting Secretary Wolfsohn's letter dated August 28, 1952, submitting your proposed report on the Weber Basin Project, Utah, in response to the President's letter to you of August 30, 1949.

An analysis of the report has been made in the light of the instructions contained in the President's letter and his policies as set forth from time to time in our review of project reports and in the efforts made to formulate a national water resource developments policy. Among the points of major concern to us are the following:

1. The use of the capitalization of benefits method of calculation of costs to be allocated to flood control has not been accepted by the Corps of Engineers. Your report proposes an allocation based on the capitalization of the benefits over a 100-year period with interest at $2\frac{1}{2}$ percent. You estimate the tentative allocation on this basis to be \$7,393,000. The Corps of Engineers disagrees with this method of allocation because it considers that one of the objectives of multiple-purpose development is to have all the purposes share in the savings and because of the extended 100-year period of projection of benefits. At the time of the consideration of the enrolled bill the Corps of Engineers estimated the proper non-reimbursable allocation to flood control for the project to be about \$1,600,000.

2. The report proposes to show return of about a fourth

of the costs allocated to irrigation by taking part of the revenues received from the return over a period of 60 years with interest at 2 percent of the costs allocated to water supply and transferring them as a credit to the irrigation repayment. This proposal involves the same policy questions we have raised consistently with respect to power revenues on irrigation projects.

3. The report proposes an allocation of \$3,568,000 to recreation, of which about \$2,193,000 represents allocations of joint costs and \$1,375,000 is for specifically identifiable recreational features. As you know, while this office has never favored the allocation of any joint costs of multiple-purpose water resources projects to recreation unless such benefits were considered of national significance or were fully reimbursable, the law authorizing this project permits a non-reimbursable allocation to recreation to be made in this particular case. The specific separate recreational features such as boat ramps and bathing beach, go far beyond the facilities which we have, in connection with our review of the President's Water Resources Policy Commission report, considered as a Federal responsibility. This is a matter which can be reviewed at the time estimates of appropriation for their construction are presented for consideration.

Inasmuch as the Congress authorized the Weber Basin Project, Utah, in August 1949 and has now appropriated funds to initiate construction, the President has authorized me to advise you that there would be no objection to your proceeding with the work at this time.

Sincerely yours,

(Signed) F. J. LAWTON,
Director.

UNITED STATES DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington 25, D. C., September 16, 1955.

To: Secretary of the Interior.
From: Acting Asst. Commissioner of Reclamation.
Subject: Request for Approval of Modifications to the authorized
Weber Basin Project, Utah.

Public Law 273, 81st Congress, authorizing the Weber Basin Project provides that the project be constructed, operated, and maintained substantially in accordance with the plans set forth in the feasibility report, with such modifications, omissions, or additions to the works as the Commissioner of Reclamation, with approval of the Secretary of the Interior, may find proper and necessary for carrying out the purposes of the project. During the course of construction of the project, studies have been under

way to firm up the definite plan which was approved and adopted by the Department on August 28, 1952, and cleared with the Executive office of the President on September 29, 1952. As a result of these studies we find it advisable to modify the project plan in some particulars.

The major changes in the project plan involve the extent of conveyance facilities required as a part of the project and the extent of lateral and pipe distribution systems required to serve the lands. The requirements for such facilities were included in the authorizing report which was printed as Senate Document No. 147, 81st Congress, 2nd session, but were not all specifically included in the Definite Plan Report required under the special circumstances of the project.

A statistical comparison between the Feasibility Report of July 15, 1949, the basic document upon which authorization was based, and the presently revised Definite Plan, in respect to the proposed Lateral Systems and their estimated construction costs, together with related economic aspects of the over-all project, is attached.

The latest estimate of project costs shown in the attachment does not include costs associated with construction of the small reservoirs contemplated in the project plan to serve the upper valley lands above Wanship and Pineview reservoirs but deferred until future changes in the physical plan and establishment of their economic justification finds them more favorable for construction.

In recent months officials of the Weber Basin Water Conservancy District have been negotiating subscription contracts to supply project water to lands requiring laterals and pipe distribution facilities in the service areas of the Davis and Weber Aqueducts, and the District has requested the Bureau to construct the necessary facilities. As a result, the proper plan for the development in the more important area is now well established and the nature of the area is such that pipe distribution systems are necessary rather than open ditches. As shown in the attached comparison, the resulting estimated cost for project laterals and pipe distribution systems as now determined necessary increases from the \$1,400,000 estimated in the authorizing report to \$5,809,000. The total cost of the Weber Basin project as now proposed for modification is estimated to be \$70,110,000.

The estimated cost of the project as modified in 1952 and approved by Acting Secretary Wolfsohn on August 28, 1952, was \$70,352,000. The project as presently proposed for further modification by the inclusion of the necessary conveyance facilities can, therefore, be constructed within the estimated cost of the project as approved by the Department in August 1952, and can be accomplished within the provisions of the repayment contract with the water users. This is possible because of the savings which have resulted from low construction bids received for the major features of the project now under way. With similar low bids on some of the remaining features, the estimated total cost of the project is expected to be within the original estimate of \$69,534,000 in the Feasibility Report of 1949.

I find the proposed modifications and additions to be proper and necessary for carrying out the purposes of the project as authorized by Public Law 273, 81st Congress, and, accordingly, recommend your approval in order that the Bureau might proceed with the orderly construction of the project.

(Signed) DON S. CAMPBELL,
Acting Assistant Commissioner.

Approved: September 26, 1955.

(Signed) FRED G. AANDAHL,
Assistant Secretary of the Interior.

Statistical comparison between feasibility report (1949) and revised definite plan (1955)

Item	Feasibility report (1949)	Revised definite plan (1955)
Lateral System (lump sum estimate).....	\$1,400,000	
System approved in the 1952 modified plan:		
Layton Canal Lateral System.....		\$900,000
Warren Canal Lateral System.....		210,000
Additions in the presently proposed modification:		
Weber Aqueduct Lateral System.....		1,291,000
Davis Aqueduct Lateral System.....		3,408,000
Total.....	1,400,000	5,809,000
Estimated total project cost.....	69,534,000	70,110,000
Tentative Allocation of costs:		
Irrigation.....	40,234,000	40,551,000
Municipal water.....	18,744,000	16,868,000
Flood Control ¹	5,900,000	7,393,000
Recreation ¹	4,656,000	3,568,000
Fish and wildlife ¹		1,730,000
Repayment period.....	60 years	60 years
Revenues available for repayment of reimbursable project costs:		
From irrigation water.....	30,102,000	27,714,000
From municipal water.....	28,116,000	30,213,280
From surplus energy.....	1,626,000	1,038,000
Total.....	59,844,000	58,965,280
Repayment of Municipal Water Investment.....	18,744,000	16,868,000
Repayment of Irrigation Investment:		
From irrigation water users.....	30,102,000	27,714,000
From municipal water users.....	9,372,000	11,799,000
From sale of surplus energy.....	760,000	1,038,000
Total.....	40,234,000	40,551,000
Surplus after repayment shown above in 60th year:		
Municipal water.....	866,000	1,546,280
Power.....		
Total.....	866,000	1,546,280

¹ Nonreimbursable.

WEBER RIVER PROJECT

UTAH

The Weber River project, originally called First Division, Salt Lake Basin project,¹ was found feasible by the Secretary on January 7, 1927, and approved by the President on January 8, 1927, under the provisions of section 4 of the act of June 25, 1910 (36 Stat. 836) and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702).

PROVISIONS OF INTERIOR DEPARTMENT APPROPRIATION ACT, 1926

[Extract from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1926, and for other purposes. (Act of March 3, 1925, 43 Stat. 1141, 1170, Public Law 580, 68th Cong., 2d sess.)

* * * That the following sums are appropriated out of any money in the Treasury not otherwise appropriated, for the Department of the Interior for the fiscal year ending June 30, 1926, namely:

* * * * *

The following sums are appropriated out of the special fund in the Treasury of the United States created by the act of June 17, 1902, and therein designated "the Reclamation Fund," to be available immediately:

* * * * *

Salt Lake Basin project, Utah, first division: For construction of Echo Reservoir, Utah Lake control, and Weber-Provo Canal, and incidental operations, \$900,000: *Provided*, That any unexpended balance of any appropriation available for the Salt Lake Basin project for the fiscal year 1925 shall remain available dur-

¹ See page 489, Hyrum project.

ing the fiscal year 1926: *Provided further*, That no part of this appropriation shall be used for construction purposes until a contract or contracts in form approved by the Secretary of the Interior shall have been made with an irrigation district or with irrigation districts organized under State law, or water users' association or associations, providing for payment by the district or districts, or water users' association or associations, as hereinafter provided: *Provided further*, That the operation and maintenance charges on account of land in this project shall be paid annually in advance not later than March first, no charge being made for operation and maintenance for the first year after said public notice. It shall be the duty of the Secretary of the Interior to give such public notice when water is actually available for such lands.

* * * * *

THE SECRETARY OF THE INTERIOR,
Washington, January 7, 1927.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: I wish to make concerning the First Division of the Salt Lake Basin project, in Utah, the following statement and finding of feasibility:

Section 4 of the Act of June 25, 1910 (36 Stat., 835) provides in effect that after the date of that act no irrigation project to be constructed under the Act of June 17, 1902 (32 Stat., 388) and acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, section 4, Act of December 5, 1924 (43 Stat., 701) provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

The various features of the first division of the project requiring investigation and report under subsection B, section 4, Act of December 5, 1924, *supra*, will be discussed in the order in which presented in that subsection, as follows:

WATER SUPPLY

Source

Weber River. Has a mean annual flow of about 570,000 acre-feet. There is sufficient flood water in the Weber River to fill the Echo Reservoir (which the United States proposes to construct) in most years with holdover from years of large runoff. It will be possible to fill the reservoir on an average of three years out of four based on records for the past twenty years. By exchange of Echo reservoir storage and diversion of surplus Weber River flood waters, about 15,000 acre-feet can be diverted annually from a point on the Weber River above the reservoir to the Provo River by means of a canal through the Kamas Bench. By this means it will be possible to lengthen the flood flow season and increase the low water flow on the Provo River.

Storage capacity

The storage capacity of Echo reservoir on Weber River is 74,000 acre-feet.

ENGINEERING FEATURES

Storage dam

The proposed dam is to consist of an earthen embankment across Weber Valley about one-half mile above the town of Echo, Utah. The maximum height of the dam will be 125 feet, and its length about 1,800 feet. The face of dam is to be protected by riprap consisting of four feet thickness of dump rock. The spillway capacity is to be adjusted for floods of 15,000 second feet. Outlet works will have a capacity of 1,200 second feet. The embankment will contain about 1,400,000 cubic yards of material.

Main diversion canal

A diversion canal is proposed to be constructed to conduct the waters of the Weber River across the Kamas Bench to the Provo River system for use on lands in Utah and Salt Lake counties. This canal is to be located about 25 miles upstream from Echo reservoir, and is to be about eight miles in length with a capacity of 210 second feet.

Laterals

No canals (other than the diversion canal), laterals, or drainage construction is contemplated as a part of the first division of the project, the plan being simply at the present time to supply stor-

age facilities for areas under existing canals in the Weber and Provo River valleys.

Drainage

No drainage will be provided at this time for the first division.

COST OF CONSTRUCTION BY FEATURES

Storage dam (including relocation of U.P.R.R. and Lincoln Highway, rights of way, etc.)	\$2,700,000
Diversion canal from Weber River to Provo River	300,000
Total—First division of Salt Lake Basin project	3,000,000

TOTAL COST

As shown above, the total cost of the first division of this project is estimated to be about \$3,000,000.

LAND PRICES AND PROBABLE COST OF DEVELOPMENT

The first division of the Salt Lake Basin project will benefit about 80,000 acres of irrigable land in the counties of Summit, Morgan, Weber, Davis, Wasatch, Utah and Salt Lake, Utah. All of this land is colonized and settled and a supplemental or late season water supply will be provided. The soil consists of loam, clay loam, and sandy loam. Good crops of alfalfa, sugar beets, wheat, fruits, canning produce, and other crops common to this altitude (between 4,000 and 5,000 feet) are raised. Excellent marketing and transportation facilities exist. As an example of farm income, crop values on four typical farms are given:

	Area (acres)	Total crop value	Crop value per acre
1.....	32	\$2,509	\$72
2.....	24	1,768	73
3.....	20	1,143	57
4.....	26	1,260	49
Average.....	25.5	1,670	65.60

FINDING REGARDING FEASIBILITY OF PROJECT

The foregoing data justify the conclusion that the project is feasible from an engineering, agricultural and economic standpoint and I accordingly so find and declare.

ADAPTABILITY OF LAND TO SETTLEMENT AND FARM HOMES

The land embraced in the project is of more than average fertility. The area included within the project can be utilized in pro-

duction of crops and is prepared for the effective application of water. Good yields of all crops grown in this locality are assured. The farmers at present on the lands as a rule have savings and checking accounts in the local banks, are industrious, pay their debts and constitute a solid class of citizens in the State of Utah.

PROBABLE RETURN TO RECLAMATION FUND OF COST OF CONSTRUCTION

A contract is about to be entered into with the Weber River Water Users' Association for repayment of the cost of the project on the basis of twenty equal annual instalments. The works can be completed in less than five years, if Congress appropriates the necessary funds, and payments in accordance with the terms of the proposed contract will begin on December 1 of the year in which the Secretary announces the completion of expenditures for the first unit. The average construction cost of this division of the project will probably be about \$40 an acre, making the average yearly payment \$2.00 an acre. To this will be added the annual expense of operation and maintenance.

The total yearly charge will not be greater than the irrigators can pay and it is believed that the additional water supply will increase incomes so as to enable the irrigators to meet the required payments on this project.

The settlers will be under specially favorable conditions to respond to the development due to the increased water supply. The agricultural production in the Nation is not keeping pace with increase in population. These lands must continue to be intensively cultivated and the settlers will be helped so far as practicable to organize for cooperation in production and marketing. The favorable conditions recited justify the belief that this project will return the cost thereof.

Because of the urgent need for a larger water supply by the present settlers on the 80,000 acres to be benefited by the first division of the project and because of the additional development of this area which will ensue from the construction, the project is destined greatly to benefit the Nation. I recommend approval of the first division of the project as outlined and request authority to make contracts for and to proceed with its construction.

Very truly yours,

(Signed) HUBERT WORK,
Secretary.

Approved January 8, 1927.

(Signed) CALVIN COOLIDGE,
President.

WILLISTON PROJECT

NORTH DAKOTA

The Williston project was authorized by the Secretary¹ on January 23, 1906, under the Reclamation Act of 1902 (32 Stat. 388) ; examined and reported upon by a Board of Army Engineers as one of two units of the Missouri River pumping project (Williston and Buford-Trenton), and approved by the President on January 5, 1911, pursuant to the act of June 25, 1910 (36 Stat. 835).

By 1914 most of the water-right applicants were in default. The project never became fully settled, and the landowners were not particularly interested in irrigation after it became available. In 1924 the Committee of Special Advisers on Reclamation (Fact Finders Committee) found that the history and prospects of the project did not justify its further operation by the Bureau of Reclamation, and recommended that the project be appraised and sold, and the losses incurred charged to the Reclamation Fund. The act of May 26, 1926 (44 Stat. 653), authorized the cancellation of all water-right charges and the release of all liens existing against the lands in the Williston project on account of the water-right charges.

A new project in the same general vicinity has been authorized as a part of the Missouri River Basin project under the provisions of the Flood Control Acts of 1944 and 1946.

¹ See page 186, Buford-Trenton project.

YAKIMA PROJECT

WASHINGTON

The Tieton and Sunnyside divisions of Yakima project were authorized by the Secretary on December 12, 1905, under the Reclamation Act of 1902 (32 Stat. 388) ; examined and reported upon by a Board of Army Engineers pursuant to the act of June 25, 1910 (36 Stat. 835), which recommended that Sunnyside and Tieton divisions be continued as primary projects, and Benton, Kittitas, and Wapato divisions be developed into a general system of storage reservoirs for the Yakima Valley. The recommendations of the Board were approved by the President on January 5, 1911.

Kennewick Highlands was found feasible by the Secretary on March 6, 1931, and approved by the President on March 7, 1931.

Kennewick division, including Kennewick Highlands, was authorized by the act of June 12, 1948 (62 Stat. 382).

Roza division was found feasible by the Secretary on November 1, 1935, and approved by the President on November 6, 1935, under the provisions of section 4 of the act of June 25, 1910 (36 Stat. 836), and subsection B of section 4 of the act of December 5, 1924 (43 Stat. 702).

TIETON AND SUNNYSIDE DIVISIONS

UNITED STATES GEOLOGICAL SURVEY,
RECLAMATION SERVICE,
North Yakima, Wash., October 16, 1905.

CHIEF ENGINEER,
U. S. Reclamation Service, Washington, D. C.

SIR: We, the undersigned Board of Engineers, appointed to investigate and report upon the Tieton Project, have studied this project as an integral part of the full utilization of the water resources of the Yakima Basin, and have the honor to report as follows:

The Tieton Project contemplates the irrigation of about 24,000 acres of land in the Yakima Valley, near and west of the City of North Yakima, adjoining similar lands, at present under a high state of cultivation. The water is to be taken from the Tieton River, the natural flow of which is at all times sufficient for the requirements of the Project and for the water right of the only canal now taking water from said stream.

The Tieton discharges into the Naches River and the Naches into the Yakima River. The diversion of Tieton waters for this project will effect the supply available for water users below the mouth of the Tieton, and in order to satisfy their existing rights, as based upon the amounts actually diverted during the irrigation season of 1905, we find it necessary to provide a storage of 50,000 acre-feet and consider it advisable to obtain such storage as follows:

50,000 acre-feet in Bumping Lake, on the head-waters of the Naches River and 20,000 acre-feet in either Lake Keechelus, Kachess or Cle Elum on the head-waters of the Yakima River.

We estimate the cost per acre, including ten years' maintenance, on basis of 24,000 acres, of good land under the project at \$55.00, this price increasing if the acreage of good land under the project is found to be less.

We find that much of the land is of excellent quality and well adapted to the production of such high-priced crops as fruit and hops, now being produced in large quantities on the adjoining land. We also find that other portions of the land have hard-pan close to the surface, which leaves some doubt in our minds regarding its productiveness and value as compared with its cost of irrigation. The owners of said land, however, do not regard this condition as a detriment and are anxious to sign agreements to take water for as much land as they can retain and are willing to sign the usual contracts for the disposal of excess lands. We think it necessary that this matter be passed upon at once by a soil expert, and have taken steps to this end. If as a result of the report of the soil expert the acreage be decreased the cost acre will increase, but we believe that the project will be a feasible one, even at a considerably higher cost per acre than has been above stated on the basis of 24,000 acres.

We find that the summer flow of the Yakima, Naches and Tieton Rivers, during the seasons of 1904 and 1905 was completely diverted by existing canals from the Yakima, Naches and Tieton Rivers.

We are of the opinion that in order to avoid serious complications regarding water rights in the future, and to assure to the United States the unquestioned right to divert Tieton waters and to substitute for same water from storage reservoirs, it is essential before any Project in the Yakima Basin can be undertaken, that practically all the appropriators and users of water in said basin define their respective claims, and that said claims do not in the aggregate exceed the amounts actually diverted during the irrigation season of 1905.

This view has been communicated to the people in interest and

strong efforts are now being made by representative water users towards an amicable and satisfactory settlement, so far as the private users are concerned. In this connection it is necessary to bear in mind that there are from 100,000 to 125,000 acres of land bordering on the Yakima River, in the vicinity of North Yakima, and included in the Yakima Indian Reservation. These lands have all been allotted and a small portion of them are under irrigation. The rights of the Indian Reservation to water from the Yakima River have never been adjudicated. During October, 1905, the aggregate diversions of all private irrigators on the Yakima, Naches, and Tieton rivers, averaged 1750 s.f. as compared with 268 s.f. diverted by the Indian Reservation. Lower appropriators secured an injunction during August, 1905, against the Indian officials, maintaining a dam in the Yakima River, and as a result the Indians' diversion was decreased to 147 s.f.

Increased diversion for the Yakima Indian Reservation during the summer months, in years of run-off similar to 1900, 1904, and 1905, would result in a shortage to prior irrigators along the stream, with the effect that land now cultivated would return to its desert state. The people affected would not submit and expensive litigation would be the certain result. We therefore consider it important, that in connection with the definition of claims of other water users, the water rights of the Yakima Indian Reservation be likewise defined, so that interminable and costly litigation may be avoided, and further irrigation development be thus made possible in the Yakima Valley.

We, therefore, recommend that the construction of the Tieton Project be authorized, and that the sum of \$1,000,000 be set aside therefor, subject to the following conditions.

1st. That the report of the Soil Expert be favorable.

2nd. That practically all the private water users on the Yakima, Naches and Tieton Rivers submit to the Secretary of the Interior proof of satisfactory mutual agreement, to limit their respective claims.

3rd. That the land owners under the Tieton Project form a Water Users' Association and the usual contracts be signed for the disposal of practically all the excess land holdings, and that at least 90% of the remainder of the lands be subscribed to the Water Users Association.

We further recommend that the rights to water of the Indian Reservation be defined by the Secretary of the Interior with due consideration to the basis of adjustment adopted by the private water users.

Very respectfully,

(Signed) A. P. DAVIS.
A. J. WILEY.
MORRIS BIEN.
D. C. HENNY.
JOSEPH JACOBS.

UNITED STATES GEOLOGICAL SURVEY,
October 24, 1905.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: I have the honor to transmit herewith copy of a report of a board of engineers, dated October 16, upon the Tieton Project in the Yakima Basin, State of Washington. The board recommends as follows:

We therefore recommend that the construction of the Tieton Project be authorized, and that the sum of \$1,000,000 be set aside therefor, subject to the following conditions:

First. That the report of the Soil Expert be favorable.

Second. That practically all the private water users on the Yakima, Naches and Tieton rivers submit to the Secretary of the Interior proof of satisfactory mutual agreement to limit their respective claims.

Third. That the land owners under the Tieton Project form a water users' association and the usual contracts be signed for the disposal of practically all the excess land holdings, and that at least 90 per cent of the remainder of the lands be subscribed to the water users' association.

We further recommend that the rights to water of the Indian Reservation be defined by the Secretary of the Interior, with due consideration to the basis of adjustment adopted by the private water users.

In my letter of October 14 I called attention to the fact that about \$2,500,000 should be provisionally allotted to the State of Washington. Of this amount, \$500,000 has been suggested for the Okanogan Project, leaving \$2,000,000 for the Yakima Project, which includes this, the Tieton Project.

I respectfully recommend that this matter be given approval.

Very respectfully,

(Signed) CHAS. D. WALCOTT,
Director.

UNITED STATES GEOLOGICAL SURVEY,
RECLAMATION SERVICE,
Pendleton, Oreg., October 31, 1905.

CHIEF ENGINEER,
U. S. Reclamation Service, Washington, D. C.

SIR: In accordance with your instructions the undersigned board of engineers has carefully considered the results of surveys and the future policy of the Reclamation Service in the Yakima Valley and has the honor to submit the following report:

EXISTING CONDITIONS

There are at present under irrigation in the Yakima Basin about 120,000 acres of land, for which the total low water flow of the

river was diverted in 1905. Except so far as practicable by greater economy in the use of water, irrigation of new land must lead to water shortage on lands now irrigated and, consequently, to litigation, unless the flood waters of the river be stored.

PENDING LITIGATION

Litigation was commenced in August, 1905, owing to shortage of water in the river resulting from alleged illegal diversion by the Yakima Indian Reservation and such diversion was stopped through injunction proceedings. At the suggestion of the Supervising Engineer of the Reclamation Service the parties to this litigation have agreed to suspend action until January 1, 1906, so as to afford time for an attempt to adjust all water claims outside of court.

IRRIGABLE LANDS NOT UNDER EXISTING CANALS

The amount of irrigable lands in the Yakima Valley not yet irrigated and lying under canals projected by the Reclamation Service may be estimated at 340,000 acres. In addition to this there is on the Yakima Indian Reservation, not at present irrigated, an area of over 100,000 acres, which can be cheaply placed under canals, but for which there is no late summer water in the river.

Further, fine bodies of land exist above projected Reclamation Service canals, bringing the total of irrigable lands not under existing canals up to 500,000 acres.

LIMITATIONS OF ULTIMATE DEVELOPMENT

About 20,000 acres of dry land under existing canals can be fully irrigated by the exercise of reasonable economy in the use of water, from the natural flow of the river. Additional irrigation will be dependent upon the storage of flood waters. We find that practicable storage can be developed sufficient to provide a supply for only 300,000 acres and that, consequently, the irrigation development in the valley is limited by the possibility of storage, and that a choice must be made as to the lands upon which available storage waters are to be used.

DIVISIONS OF YAKIMA PROJECT

We find that the irrigation of additional land can be accomplished by the successive construction of divisions of a general Yakima project and have considered the following divisions, each of which can be treated as a separate unit:

	<i>Acres</i>
Ledbetter Division (Benton)	210,000
Sunnyside Division	40,000
Tieton Division	24,000
Kittitas Division	60,000

This Board has previously reported upon the Tieton division, and has recommended its construction upon certain conditions.

We find that the Ledbetter and Sunnyside divisions can be constructed at a cost considerably below the value of the lands when irrigated.

We find that the cost of constructing the Kittitas division approaches more closely to the value of irrigated lands.

NECESSITY FOR ADJUSTMENT OF WATER CLAIMS

The construction of any one of the above mentioned divisions necessitates the building of storage reservoirs, and in order to secure to the United States the use of all the waters to which it will be entitled, without interminable litigation, we consider it essential that an adjustment of water claims be first accomplished.

SUNNYSIDE CANAL

The Sunnyside canal is owned by the Washington Irrigation Company, which is one of the oldest and largest appropriators and users of Yakima River water, its appropriation being 1050 second-feet, and its use having increased from year to year, amounting in August, 1904, to 605 second-feet and in August, 1905, to 632 second-feet. The Company upon its showing of due diligence in the past may make good its full appropriation and thus deprive subsequent appropriators of water, upon which lands at present irrigated in other parts of the valley are dependent. Being in an apparently strong position to legalize its claim, and possessing large financial resources, it stands as a menace to the entire valley. With its claim limited to actual diversion, amicable adjustment of water rights seems probable. The company, on the other hand, realizes that it can legalize its claim only through extensive litigation, regarding the result of which nothing is certain except that it will be bitter, costly, and tedious, and that it will probably be accompanied by physical violence at headgate diversion points.

SUNNYSIDE CANAL OPTION

The Washington Irrigation Company has made a proposition to the United States to sell to it all of its rights and property, except lands to be irrigated, and has thus made it practicable for the water rights in the valley to be settled on an amicable basis. The proposition is contained in a certain option dated October 23, 1905, of which two duly executed copies are enclosed.

SUNNYSIDE DIVISION OF YAKIMA PROJECT

This division contemplates the purchase, enlargement, and extension of the Sunnyside Canal system and, in connection therewith, the construction of suitable storage works at the upper

Yakima lakes, so that besides 9,000 acres of company lands, to which a water right attaches, some 40,000 acres of other arid lands may be reclaimed. The terms of the option are that the property may be taken over free of incumbrances except water contract obligations, and the price named therein is \$250,000.

We find that not over 60 percent of the present canal capacity and of the water actually diverted is required to satisfy outstanding contract obligations. Assuming the entire value of the property to be comprised in the remaining 40 percent, we estimate its value, on the basis of the cost of duplication, at \$301,000. In this valuation proper deductions have been made for depreciation of perishable structures and no allowance has been made for advantage of position, value of right of way, or the fact that the property is in going condition. Neither have any additions been made for engineering, administration during construction, or legal expenses. This valuation is further based upon the supposition that present water users will either restrict their claims to the amount of water due under their contracts, or pledge their lands to an equitable charge to pay for an increased supply.

The value of water rights has been determined on the basis of the cost of providing storage to produce equal results.

The full development of this division includes the improvement, enlargement, and extension of the canal and lateral system so as to cover 40,000 acres of new land; further, the substitution of substantial masonry for present perishable structures, in order to reduce maintenance charges and secure better control of the water.

We estimate the total cost of this division, including storage, at from \$1,500,000 to \$2,000,000, according to the extent to which present irrigators may decide to obtain more water than their contracts call for.

We find that development can be economically made at successive stages, and that an expenditure of \$1,000,000 at the present time will provide the purchase price and complete the first stage, which in itself will return the money expended.

We estimate that, exclusive of maintenance, a charge of \$40 per acre for the newly irrigated land, and a proportional charge for the irrigated land to cover its share of betterments and additional water over contract requirements, will repay the cost of construction, and we believe the lands to be ample security for such charges.

WATER RIGHTS OF YAKIMA INDIAN RESERVATION

The rights of the Indian Reservation have never been adjudicated. We find that actual diversions by the Yakima Reservation canals are sufficient to cover only a small proportion of the 125,000 acres of land on the reservation which can be readily and cheaply irrigated.

The natural desire to make this great body of land fully productive must be taken into serious consideration by the Reclamation Service. To have all private water claimants make amicable

adjustments of their claims, and to leave the rights of the Indian Reservation undefined, cannot be considered as providing a safe basis from which to proceed with reclamation work.

RECOMMENDATIONS

In view of the above we respectfully recommend:

1. That the sum of \$1,000,000 be set aside for the purchase of the property of the Washington Irrigation Company and the construction of the Sunnyside division of the Yakima project, and that authority be granted to negotiate for necessary rights of way.

2. That no construction be undertaken until practically all private water claimants have satisfactorily adjusted their claims.

3. That no construction be undertaken until a satisfactory understanding is had with the Indian Office regarding the use of water on the Indian Reservation.

4. That if the above conditions have not been met by the time the option of the Washington Irrigation Company expires, said company be requested to extend such option.

5. That, provided said option be still in effect when all the above conditions shall have been complied with, said option be exercised and construction commenced.

6. That the Ledbetter (Benton) and Kittitas divisions of the Yakima project receive due consideration as funds for their construction shall become available.

Respectfully submitted,

(Signed) A. P. DAVIS,
A. J. WILEY,
D. C. HENNY,
Board of Engineers.

UNITED STATES GEOLOGICAL SURVEY,
November 8, 1905.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: The Yakima Project in the State of Washington has now been fully investigated in regard to all preliminary matters upon which the feasibility would depend.

It is found that the project can be divided into four divisions each of which can be treated as a separate unit:

1. Ledbetter division involving the irrigation of 210,000 acres,
2. Sunnyside division involving the irrigation of 40,000 acres,
3. Tieton division involving the irrigation of 24,000 acres,
4. Kittitas division involving the irrigation of 60,000 acres.

Under date of October 24, 1905, this office submitted a report and recommendation concerning the Tieton division of this project.

The construction of the Ledbetter division would involve a much larger sum of money than would be available from the reclamation fund at the present time.

The cost of construction of the Kittitas division approaches quite closely to the value of the irrigated land.

The Sunnyside division for the irrigation of 40,000 acres of land, can be carried out by an extension and improvement of the present Sunnyside Canal system of the Washington Irrigation Company, at a total cost of from \$1,500,000 to \$2,000,000 according to the extent to which the present irrigators may decide to enter into contracts with the Government for water in order to supplement their present available supply.

The development of this project can be economically made in successive stages and the expenditure of \$1,000,000 at the present time will provide for the purchase price of the Sunnyside Canal system and complete the first stage, which in itself will return the money expended.

The Washington Irrigation Company has agreed to sell its system to the United States for \$250,000, and I transmit herewith a copy of an executed agreement to this effect. The price proposed for this system is reasonable and the conditions are very favorable to the Government as the estimated value of the system on the basis of the cost of duplication is in excess of the purchase price. At the same time no allowance has been made for the advantage enjoyed by this Company in early priority of water, value of right of way and the fact that the Company is practically on a paying basis.

It is observed that there is but one witness to the signature of David C. Henny, Supervising Engineer, Reclamation Service. As there can be no doubt as to the signature in question, it was not deemed advisable to return his contract for correction in this particular, and I therefore suggest that in its consideration this formality be waived.

In my report of October 24, 1905, upon the Tieton Project, attention was called to the proposed allotment of the funds in the State of Washington. The report of this office of October 14 upon the state of the reclamation fund suggested the allotment of \$2,500,000 for the Yakima Project in the State of Washington. Of this amount \$500,000 has been suggested for the Okanogan Project and \$1,000,000 for the Tieton Project, leaving \$1,000,000 for the Sunnyside division of the Yakima Project, which as stated above, is sufficient for the acquisition of the Sunnyside Canal system and the first stage of the Sunnyside division.

In this connection I desire to call attention to the report of the Board of Engineers of October 16, 1905, upon the Tieton Project, copy of which was transmitted with office letter of October 24.

In said letter there is a detailed statement of the present conditions regarding the water supply in the Yakima Valley on account of the undetermined claims of the Yakima Indian Reservation.

The Sunnyside Canal system is owned by the Washington Irrigation Company, one of the earliest and largest appropriators and users of Yakima River water, its claim of appropriation being

1050 second feet and its use of water having increased from year to year, amounting in August 1904 (the critical stage of the irrigating season) to 605 cubic feet per second, and in August, 1905, to 632 cubic feet per second.

The Company may upon a showing of due diligence in the past, make good its full claim of 1050 second feet and thus deprive subsequent irrigators of a part, and perhaps the whole of the water upon which lands now irrigated in other parts of the Valley are dependent. The Company is in an apparently strong position to enforce its claim, and possessing large financial resources, it stands as a menace to the entire Valley.

With this Company's claim limited to actual diversion, amicable adjustment of water rights may be possible.

Efforts are now being made by the irrigators in the Yakima Valley to provide for a limitation of the rights of the various claimants to the water upon a basis of actual diversion and of the irrigable areas under ditch.

Among the important claims to the use of the waters of Yakima River are the canals on the Indian Reservation. The actual diversions for these canals are sufficient to cover only a small proportion of the 125,000 acres of land on the Reservation which can be readily and cheaply irrigated. The natural tendency would be to make this great body of land fully productive and in any adjustment of the water rights this situation must be taken into serious consideration.

To have all private water claimants make amicable adjustment of their claims and to leave the rights of the Indian Reservation canals undefined, cannot be considered as providing a safe basis upon which to proceed with reclamation work in this Valley.

In the report upon the Tieton Project, heretofore referred to, this matter has been considered in detail and the recommendation was made that the rights to water of the Indian Reservation be defined by the Secretary of the Interior with due consideration to the basis of adjustment adopted by the private water users.

In view of these conditions it is recommended:

1. That the sum of \$1,000,000 be set aside for the purchase of the property of the Washington Irrigation Company and for the construction of the Sunnyside division of the Yakima Project; also that the contract with the Washington Irrigation Company for the purchase of the Sunnyside Canal system be approved, subject to the determination to proceed with construction.

2. That no construction be undertaken until practically all private water claimants have satisfactorily adjusted their claims.

3. That no construction be undertaken until a definite and satisfactory determination has been reached as to the amount of water to which the Indian Reservation canals are entitled.

4. That the Ledbetter and Kittitas divisions of the Yakima Project receive the consideration as funds for their construction shall become available.

Very respectfully,

(Signed) CHAS. D. WALCOTT,
Director.

OFFICE OF THE SECRETARY,
Washington, November 15, 1905.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: Some misunderstanding having arisen as to the effect of my action of the 8th instant in my communication to you of that date in the matter of the Tieton reclamation project in the State of Washington, you are advised that it was the intention of the Department by said action to simply suspend action on your recommendation of the 24th ultimo, pending further investigation and consideration of said project.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

OFFICE OF THE SECRETARY,
Washington, December 12, 1905.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: Referring to your letter of October 24, 1905, and to my reply thereto of November 8th and 15th, respectively, relative to the Tieton reclamation project in the State of Washington, you are advised that after further consideration of the matter and the receipt of further and more detailed information in regard to said project, I have concluded to, and hereby do approve said project and set aside \$1,000,000.00 therefor from the Reclamation Fund subject, however, to the following conditions, and with the understanding that not a dollar of the moneys hereby appropriated shall be expended for construction until said conditions are complied with, namely:

First: The adjustment of all conflicting claims of those who are appropriating water from the Yakima River or any other body of water, for irrigation, power, or any other purpose.

Second: The determination of all suits now pending to prevent the diversion of water from the Yakima River to the Yakima Indian Reservation, and any and all other litigation that in any way tends to embarrass or restrict the appropriation of the waters from said river or any other body of water needed for the irrigation of the lands under said proposed project.

Third: The determination of the questions presented by the proposed contract to purchase the Sunnyside canal for \$250,000.00, now pending before the Assistant Attorney General for this Department, and the submission to the Department, if required

or necessary, of such a contract from the owners of said canal as will meet the approval of the Department.

Fourth: The satisfactory disposition of the protest of the State of Washington against the entrance by the Government into contractual relations with the Washington Irrigation Company until the State is heard in the matter.

Fifth: The securing to the Indians on the Yakima Reservation of a sufficient water supply by passage of appropriate legislation by Congress, or otherwise.

Sixth: The settlement, termination and disposition of any and all difficulties, conflicts, litigation, complications, or controversies that will in any way tend to embarrass or restrict the appropriation and use of the waters of the Yakima River or any other stream or body of water necessary for the irrigation of the lands under this project and the lands in the Yakima Indian Reservation.

Seventh: That a sufficient acreage be pledged to secure the return to the Reclamation Fund of the cost of construction.

Eighth: That the above and foregoing matters be settled and a clean feasible proposition submitted to the Department free from all difficulties or complications, before the expenditure of any money on the construction of said project be made.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

OFFICE OF THE SECRETARY,
Washington, December 12, 1905.

The DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: Referring to your communication of November 8, 1905, relative to the Sunnyside reclamation project in the State of Washington, you are advised that after further consideration of the matter and the receipt of further and more detailed information in regard to said project, I have concluded to, and hereby do approve said project and set aside \$750,000.00 therefor from the Reclamation Fund subject, however, to the following conditions, and with the distinct understanding that not a dollar of the moneys hereby appropriated for this project shall be expended for construction until said conditions are complied with, namely:

First: The adjustment of all conflicting claims of those who are appropriating water from the Yakima River or any other body of water, for irrigation, power, or any other purpose.

Second: The determination of all suits now pending to prevent the diversion of water from the Yakima River to the Yakima Indian Reservation, and any and all other litigation that in any

way tends to embarrass or restrict the appropriation of the waters from said river or any other body of water needed for the irrigation of the lands under said proposed project.

Third: The determination of the questions presented by the proposed contract to purchase the Sunnyside canal for \$250,000.00, now pending before the Assistant Attorney General for this Department, and the submission to the Department, if required or necessary, of such a contract from the owners of said canal as will meet the approval of the Department.

Fourth: The satisfactory disposition of the protest of the State of Washington against the entrance by the Government into contractual relations with the Washington Irrigation Company until the State is heard in the matter.

Fifth: The securing to the Indians on the Yakima Reservation of a sufficient water supply by passage of appropriate legislation by Congress, or otherwise.

Sixth: The settlement, termination and disposition of any and all difficulties, conflicts, litigation, complications, or controversies that will in any way tend to embarrass or restrict the appropriation and use of the waters of the Yakima River or any other stream or body of water necessary for the irrigation of the lands under this project and the lands in the Yakima Indian Reservation.

Seventh: That a sufficient acreage be pledged to secure the return to the Reclamation Fund of the cost of construction.

Eighth: That the above and foregoing matters be settled and a clean feasible proposition submitted to the Department free from all difficulties or complications, before the expenditure of any money on the construction of said project be made.

I enclose herewith for your information copy of a letter dated the 9th instant, from Hon. W. L. Jones of the State of Washington, and copy of my reply thereto of even date herewith relative to said project.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

YAKIMA INDIAN RESERVATION, 1906

[Extract from] An act authorizing the disposition of surplus and allotted lands on the Yakima Indian Reservation, in the State of Washington, which can be irrigated under the Act of Congress approved June seventeenth, nineteen hundred and two, known as the reclamation Act, and for other purposes. (Act of March 6, 1906, 34 Stat. 53-55, Public Law 36, 59th Cong., 1st sess.)

* * * That if within the limits of the Yakima Indian Reservation, in the State of Washington, as described in the Act approved December twenty-first, nineteen hundred and four, entitled "An Act to authorize the sale and disposition of surplus or unallotted

lands of the Yakima Indian Reservation, in the State of Washington," there shall be found surplus or unallotted lands under irrigation projects deemed practicable and undertaken under the provisions of the Act of Congress approved June seventeenth, nineteen hundred and two, known as the reclamation Act, the Secretary of the Interior is hereby authorized to exclude from the provisions of said Act of December twenty-first, nineteen hundred and four, such surplus or unallotted lands which can be irrigated under such project and to dispose of the same in the manner hereinafter provided, and he is further authorized to make withdrawals of such lands for the purposes provided in said reclamation Act.

* * * * *

Sec. 8. That the Secretary of the Interior is hereby authorized to perform any and all acts and to make such rules and regulations as may be necessary and proper for the purpose of carrying the provisions of this Act into full force and effect.

UNITED STATES GEOLOGICAL SURVEY,
RECLAMATION SERVICE,
Portland, Oregon, December 24, 1906.

CHIEF ENGINEER,
Washington, D. C.

DEAR SIR: A Board of Engineers, consisting of Messrs. E. G. Hopson and D. C. Henny, has the honor to report to you upon the Wapato Project, State of Washington, as follows:

The information and conclusions herewith presented are based in the first place upon a report submitted by engineer Joseph Jacobs dated December 17 which, in turn, is based upon a report by Mr. Ernest McCulloh, who has had direct charge of investigations on the Wapato Project. Mr. Jacobs' report, inclusive of Mr. McCulloh's report, is enclosed herewith.

In the second place this report is based upon personal knowledge of the project and of the various stages of the investigations which have been made first by Mr. C. W. Paine and later by Mr. Ernest McCulloh.

In general this Board can fully agree with the statements and conclusions of engineer Jacobs, but wishes to make a few exceptions as follows:

Referring to Mr. Jacobs' statement, we beg to state that on page 2 the information furnished by Mr. Jacobs that "effort was immediately made through the Superintendent of the Agency, Mr. J. Lynch, to open negotiations with the Indians, etc." is not in exact accordance with our understanding of the facts. Mr. J.

Lynch stated that he considered it useless, from his knowledge of the Indians, to commence negotiations with them until more definite information as to the water charges on the land could be furnished.

On page 4 of Mr. Jacobs' statement toward the end of the middle paragraph, he touches upon the point of return to the tribal fund by the Reclamation Service of the value of the old ditches actually utilized in the new system.

The Jones Act of March 6, 1906, provides "that the irrigation works heretofore constructed for the Yakima Indian Reservation may be, at a cost to be determined by the Secretary of the Interior, included in any project developed under the provisions of the Reclamation Act and of this Act and become a part of said project for all purposes of the Reclamation Act, and the cost of same shall be included in the cost of such project and be paid into the Yakima Indian fund (not out of the Reclamation Fund but) out of the proceeds arising from the sale of water rights from time to time as payments on account thereof are received." It is apparent that the Reclamation Service should not reimburse the tribal fund but that the tribal fund should be reimbursed from the proceeds. The determination of the acre cost should, therefore, include estimated cost of present ditches that can be utilized, but any allotment necessary for the construction of the project need not include said cost.

Engineer Jacobs states that a ruling by the Indian Office as to obligation on the part of leased lands and sold lands to contribute towards the project to be made by the Indian Office would materially aid in solving certain problems in connection with this project.

It is the opinion of the Board that the final determination of this point will not lie with the Indian Office but with the courts, although the opinion of the Department will be of great help.

Duty of water.—Engineer Jacobs holds that the gross duty of the water for the Wapato Project would be materially greater than for the Sunnyside Project by reason of the canals being shorter. To some extent this Board can agree, but it is of the opinion that the gross duty as figured of practically one cubic foot per second to 100 acres is not sufficient. Mr. McCulloh figures, on page 7 of his report, that 1,200 second feet gross are required for practically 120,000 acres of land. This Board is inclined to place the gross duty at one cubic foot per second to 90 acres and, so far as the actual capacity of the canals is concerned, it believes that the capacity of the Toppenish and the main canal respectively, figured at one second foot to 99 acres and one second foot to 93 acres, does not provide sufficiently for months of maximum draft and that the capacity of these canals should be increased at least 15%.

Drainage.—It appears that Mr. McCulloh has figured in his final summary practically \$1,150,000 for drainage. The great bulk of this expense results from his assumption that elaborate networks of tile drains are to be laid within the section marked "Alkali land."

It is the opinion of this Board that if any necessity for laying tile drains exists it should be thrown upon the owner of the land and that the work to be done by the Government should be confined to the carrying of drainage channels where they can be readily reached by individual drains or lines of drain tile.

No provisions appears to have been made for the draining of the lands lying above the alkali lands. The necessity for extending a drainage system into these lands is uncertain, but this Board considers it unsafe to assume that no drainage system would be necessary and deems it very probable that open drains will have to be constructed quite extensively and possibly on every section line on all the flat area of the project.

Farm unit.—Exception is taken by this Board to Engineer Jacobs' preference expressed on page 8, that an 80-acre farm unit is to be preferred, "particularly so, as this would permit the industrious Indian to hold his own 80 acre allotment and obtain water for same." The industry of the Indian is something that cannot be known in advance, and it is believed that the safety of the project must lie in the fact that at least three-fourths of the land will pass into the ownership of whites under the present provisions of the Jones Bill.

ESTIMATES

Storage.—In a report submitted by Mr. Jacobs on storage in the Yakima basin in October, 1905, it will be noted from table 4 on page 7 that an estimate is made of the total storage required on the basis of various aggregate areas to be irrigated in the Yakima basins. As this area is likely to be close to 300,000 acres, it would be apparent from this table that the average storage per acre would amount for the entire tract to 2.70.

Applying this figure to the 118,000 acres proposed to be included in the Wapato Project, it follows that about 319,000 acre feet storage would be required if no water rights had matured in favor of the Indian lands. As storage is not required and has not been figured on generally prior to the middle of June, a proper deduction to be made from above total for water rights matured is estimated as follows:

	<i>Acre- feet</i>
250 second feet for 2 months.....	30,000
200 second feet for 1 month.....	12,000
150 second feet for 1 month.....	9,000
Total for 4 months irrigation after the middle of June.....	51,000

Crediting the Indian lands with this amount, it seems just that they should be charged with a storage of about 268,000 acre feet, which for 118,000 acres would make an average of about $2\frac{1}{4}$ acre ft. per acre.

On the basis of the estimated cost per acre foot of storage of \$2.25, the charge for storage would therefore amount to \$5.06 per acre.

Cost of main canals and laterals.—The total charges of main canals and laterals and other incidentals taken from the general summary of Mr. McCulloh's report, page 27, is \$920,770, or approximately \$7.80 per acre.

By reason of insufficient capacity of main canals and unit prices, which are deemed somewhat low, this Board considers that this acre cost should be increased approximately 25%, which would make the charge per acre for the above items \$9.75.

Drainage.—The total charge for drainage included in Mr. McCulloh's general summary is \$957,016 plus 20% for engineering contingencies, total \$1,148,419. In view of the previously expressed opinion that tile drains should not generally be provided by the Reclamation Service, this estimate can furnish no safe guide for what, in our opinion, should be figured as the proper charge for drainage. While about 80% of this item consists of tile drain and should largely be omitted, on the other hand, it does not include drainage ditches for the bulk of the project. A safe estimate for this work cannot very well be made at the present time and probably cannot be made until after considerable work on an actual drainage system shall have been done and the beneficial effects of it shall have been determined. For present purposes, however, it is considered that a general charge of \$6.00 per acre for drainage should prove entirely ample.

In view of the above arguments it is believed that the following is a fair approximation of the probable cost per acre for 117,769 acres included in this project:

Storage	\$5.06
Main canals, laterals, telephones, roads, rights of way and appraised value of constructed canals.....	9.75
Drainage	6.00
Total for construction.....	\$20.81
Maintenance for 10 years.....	6.00
Total	26.81

The object of this report as understood by this Board is twofold:

a. To furnish information upon which to base any present recommendation to the Secretary of the Interior for additional allotment.

On this point this Board fully agrees with Engineer Jacobs, viz., that the project can be developed as fast as funds may be available in a satisfactory and economical manner. The tentative allotment of \$100,000 made by the Secretary of the Interior should, in our opinion, be made a definite allotment as soon as a sufficient number of adult Indians have signified their consent to the sale of three-fourths of their allotments under the conditions of the Jones Bill, and as soon as legal consent has been obtained regarding lands owned by minor heirs, and such allotment should become available for the construction of storage works to the end that storage water may be furnished to lands at present under irrigation.

If any further funds can be made available for construction of this project, such funds could be advantageously used upon the consent of the Indians having been obtained.

If additional funds are available an additional allotment of any suitable amount, not exceeding for the present \$400,000, subject to the consent of the Indians being obtained, may be considered a wise investment in the interest of the Reclamation Service and the Yakima valley.

b. The determination by the Secretary of the Interior of the water charges to be paid by the Indians for the quarter of their present allotment retained by them. The present estimates, indicating that such charge for construction alone may be placed at \$21.00 per acre and for construction and maintenance included, \$27.00 per acre, furnish, in our opinion, a sufficient basis for the Secretary to adopt these figures as final so far as the Indians are concerned.

An early determination of the charges to be paid by the Indian is deemed essential for the purpose of obtaining their consent, upon which the possibility of the project at present hinges.

It is, therefore, recommended:

1. That the charges to be paid by the Indians be now fixed at \$21.00 per acre exclusive of maintenance, or \$27.00 per acre inclusive of maintenance.

2. That Mr. J. Lynch, Superintendent of the Yakima Indian Agency, be instructed to obtain the consent of the Indians affected by the project so far as required under the Jones Bill, proper contracts to that effect to be prepared by the Department.

3. That upon this consent having been obtained the tentative allotment be made definite and such additional funds, not to exceed \$400,000, be allotted to the Wapato Project for commencement of construction.

Respectfully submitted.

(Signed) D. C. HENNY,
E. G. HOPSON,
Board of Engineers.

KITTITAS DIVISION

[Extract from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1926, and for other purposes. (Act of March 3, 1925, 43 Stat. 1141, 1170, Public Law 580, 68th Cong., 2d sess.)

* * * That the following sums are appropriated out of any money in the Treasury not otherwise appropriated, for the Department of the Interior for the fiscal year ending June 30, 1926, namely:

* * * * *

Yakima project (Kittitas Division), Washington: For construction of the Kittitas Division and incidental operations, \$375,000: *Provided*, That no part of this appropriation shall be used for construction purposes until a contract or contracts in form approved by the Secretary of the Interior shall have been made with an irrigation district or with irrigation districts organized under State law providing for payment by the district or districts as hereinafter provided. The Secretary of the Interior shall by public notice announce the date when water is available under the project: *Provided further*, That no part of the sum provided for herein shall be expended for construction on account of any lands in private ownership until an appropriate repayment contract, in form approved by the Secretary of the Interior, shall have been properly executed by a district organized under State law, embracing the lands in public or private ownership irrigable under the project, and the execution thereof shall have been confirmed by decree of a court of competent jurisdiction, which contract, among other things, shall contain a provision for an appraisal, showing the present actual bona fide value of all such irrigable lands fixed without reference to the proposed construction of said Kittitas Division, and shall provide that until one-half the construction charges against said lands shall have been fully paid no sale of any such lands shall be valid unless and until the purchase price involved in such sale is approved by the Secretary of the Interior, and shall also provide that upon proof of fraudulent representation as to the true consideration involved in any such sale the Secretary of the Interior is authorized to cancel the water right attaching to the land involved in such fraudulent sale; and all public lands irrigable under the project shall be entered subject to the conditions of this section which shall be applicable thereto: *Provided further*, That no part of the sum hereby appropriated shall be expended for construction until a contract or contracts shall have been executed between the United States and the State of Washington pursuant to its land settlement act embodied in Chapter 188, Laws of 1919, as amended by Chapter 90, Laws of 1921, and by Chapters 34 and 112, Laws of 1923, or additional enactments, if necessary, whereby the State shall assume the duty and responsibility of promoting the development and settlement of the project after completion, including the subdivision of lands held in private ownership by any individual in excess of one hundred and sixty irrigable acres, the securing, selection, and financing of settlers to enable the purchase of the required livestock, equipment and supplies, and the improvement of the lands to render them habitable and productive. The State shall provide the funds necessary for this purpose and shall conduct operations in a manner satisfactory to the Secretary of the Interior: *Provided further*, That the operation and maintenance charges on account of land in this project shall be paid annually in advance not later than March 1, no charge being made for operation and maintenance for the first year after said public notice. It shall be the duty of the Secretary of the Interior to

give such public notice when water is actually available for such lands.

The unexpended balance, if any, remaining at the close of the fiscal year 1925 from the appropriation of \$375,000 made by the act referred to as the "Second Deficiency Act, fiscal year 1924," approved December 5, 1924 (Public, No. 292), for continued investigation, commencement of construction of the Kittitas unit, and incidental operations, Yakima project, Washington, is hereby reappropriated, to be available and to continue available for use during the fiscal year 1926.

KENNEWICK HIGHLANDS PROJECT

[Extracts from] An act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1931, and for other purposes. (Act of May 14, 1930, 46 Stat. 279, 308, Public Law 217, 71st Cong., 2d sess.)

* * * * *

Yakima project (Kennewick Highlands unit), Washington: For construction, \$640,000, to be immediately available: *Provided*, That no part of the funds hereby appropriated shall be expended for construction purposes until there shall have been conveyed to the United States title to the Prosser Dam and the right-of-way for the Prosser-Chandler Power Canal free of all prior liens and satisfactory to the Secretary of the Interior: *Provided further*, That all net revenues received from the disposition of power not required for pumping water for the irrigation of lands in the Kennewick Irrigation District shall be applied, first, to the payment of the construction cost incurred by the United States in connection with the Kennewick Highlands unit, including the power plant and appurtenances until said construction cost is fully paid; and, thereafter, to retire the obligations incurred by the said district in the purchase of the said dam and right-of-way; *And provided further*, That title to, and the legal and equitable ownership of, the power plant and appurtenances constructed by the United States pursuant to this appropriation shall be and remain in the United States, and all net revenues therefrom shall go to the Reclamation Fund after payment of aforesaid construction cost and retirement of said obligations.

* * * * *

THE SECRETARY OF THE INTERIOR,
Washington, March 6, 1931.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: Consideration is now to be given to the commencement of construction on the Kennewick Highlands project in the State of Washington. An Act of Congress approved May 14, 1930, (46 Stat. 279) appropriated \$640,000 to be immediately available for the construction of this project.

Before contracts may be let for the construction of this project, it will be necessary (a) that a finding be made by the Secretary of the Interior in accordance with subsection B, Section 4 of the Act of December 5, 1924 (43 Stat., 672, 702) as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development; and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

and (b) that the project be approved by the President, as required by Section 4 of the Act of June 25, 1910, (36 Stat., 835, 836).

ENGINEERING FEATURES

The Kennewick Highlands is a tract of approximately 4,000 acres of irrigable land lying adjacent to the town of Kennewick, Washington. In 1909, private interests constructed a pumping plant on the banks of the Columbia Irrigation Canal and two wood stave pipe lines 9,500 feet and 7,000 feet long, respectively, together with a few laterals for the irrigation of these lands, power being obtained by purchase from the public utility serving the territory. Development was fairly rapid, and about 3,000 acres were planted to orchards. Inadequate pumping capacity combined with the increasing needs of the trees as they approached maturity brought about a shrinkage in the irrigated area, leaving but 2,500 acres irrigated at this time. The settlers have managed to keep one pipe line in fair condition, but the other has reached the limit of its life. Most of the pumping units, although originally of good design and construction, have lost their efficiency and need replacement. The settlers have paid an average annual charge of \$14.00 per acre for a number of years, but on account of the power charge of \$8.00 per acre have been unable to effect needed improvements. Any further increase in the annual charge will cause abandonment of part, if not all, of the area.

It is proposed to replace the present worn out 24" pipe line with a wood stave line 34" in diameter and to replace pumps now lift-

ing 14 second feet of water with modern pumps to lift 42 second feet of water through an average head of 160 feet. With the retained unit this will provide a total supply of 54 second feet compared with a present supply of 26 second feet. The present distribution system is to be improved and carrying capacity in the Columbia Irrigation District canal from which the water is drawn for the Highlands is to be increased. The limit of the proposed expenditures has been fixed by contract at \$196,000. The Columbia Irrigation District canal, from which the water will be taken, diverts from the Yakima River which has a flow far in excess of the requirements.

To provide cheaper power for this project, it is proposed to build a canal of 1,000 second feet capacity, two and one-half miles long, parallel to the Yakima River at Prosser, Washington, to develop 40 feet of head, and produce 3,200 H.P. of electrical energy at a cost of \$369,000. If arrangements for use of existing transmission lines are not made, a new transmission line will be built from the power plant to the Kennewick Highlands tract, a distance of thirty miles, at an estimated cost of \$75,000. The total cost of the project would then be \$640,000.

ECONOMIC FEATURES

The average land holding in the Kennewick Highlands area is somewhat less than twenty acres, there being at this time over 100 homes on the tract. Present land prices are uncertain as land sales in recent years have been negligible because of the uncertainty of the water supply, but with the proposed improvements it is expected that the value of improved orchard lands will reach as high as \$1,000 per acre. Few sales of new lands are anticipated after the proposed reconstruction of the project, the present settlers being desirous of retaining their holdings, and the undeveloped tracts, to a large degree being owned by people now residents in the adjacent town awaiting an assured water supply. There are no public lands in the project and no settlement problems are involved. A careful survey has been made to determine productiveness, and all of the lands found to be of good or excellent quality, suitable for the production of the prevailing crops of fruits and early vegetables. With the decrease in annual charges and the increase in water supply, to be secured under the plan of rehabilitation, the future of the district is assured.

PAYMENT OF CHARGES

All of the lands to be benefited are within an irrigation district, and a satisfactory contract has been voted by the owners of the lands and confirmed by the court. The contract provides for transfer to the United States by the District of title, free of liens, to the dam, and the canal rights of way to be utilized in connection with the power feature of the project. The property to be conveyed has an estimated value of \$196,000, and the United States

is to expend up to this amount in the reconstruction of the pumping plant and distribution system as heretofore outlined. The district is by contract required to pay the United States annually \$21,000 and will receive in return the necessary power to operate the pumping plant. The estimated annual cost to the district for the operation and maintenance of the reconstructed pumping and distribution system, including payments for power is \$11.00 per acre, or \$3.00 per acre less than the present annual charge. The United States will operate only the power plant.

Of the total energy output, approximately one-third will be required to care for the Kennewick Highlands, and a market for the balance of the power now seems assured. It is expected to exchange a part of the surplus power output for the transmission service over existing lines to the Kennewick Highlands, leaving the balance available for sale. Annual payments by the district will leave an estimated net annual income of \$9,000 to apply on depreciation and repayment of the cost of construction of the power plant, which, together with income from the sale of surplus power, is expected to be sufficient to repay the total investment within a period of forty years. The appropriation act provides that net revenues shall be applied, first, to repayment of the cost incurred by the United States; thereafter, to retire the obligations incurred by the district in purchase of the dam and right of way, and thereafter the revenue is to go to the Reclamation Fund.

FINDING REGARDING FEASIBILITY OF PROJECT

It is believed that this project can be constructed within the estimated cost, and that it will result in a stable and permanent agricultural development of the Kennewick Highlands. The markets for power are believed such that the entire investment by the United States will be returned from the sales of power as provided in the appropriation act. In view of the urgency for the relief of the situation on the Kennewick Highlands, I recommend the approval of the project and the issuance of authority to proceed with its construction.

Very truly yours,

(Signed) RAY LYMAN WILBUR,
Secretary.

Approved March 7, 1931.

(Signed) HERBERT HOOVER,
President.

ROZA DIVISION

OFFICE OF THE SECRETARY,
Washington, November 1, 1935.

THE PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: The original irrigation plan for the development of the Yakima project contemplated the construction of an irrigation system to serve the lands now included in the Roza division.

The division comprises a strip of land from one to three miles wide above existing irrigation canals on the north side of the Yakima River, extending from a point near Yakima to Benton City, a total distance of ninety-nine miles. The lands are well situated for successful irrigation, the soil is excellent, and there are no serious drainage problems. The division contains an irrigable area of 72,000 acres, of which 42,300 acres will receive water by gravity flow and the remaining area will be under pumping lifts up to a maximum of 200 feet. The total estimated cost of construction of the irrigation system, complete with power plant, pumping plants, transmission lines, drainage ditches, etc., required to supply water to the entire irrigable area of the division is approximately \$15,000,000.

Water is available for the irrigation of the lands of the division from the storage system of the Yakima project, as now constructed, and the lands of the division are included within the boundaries of the Yakima-Benton Irrigation District, an irrigation district created, organized and existing under the laws of the State of Washington.

The District has entered into a contract with the United States for the purchase of 375,000 acre-feet of water, consisting of stored water and natural flow combined, at an estimated cost of \$2,500,000, which sum the District has agreed to pay in eighty semi-annual installments, beginning with June 15, following the first season in which water is available for diversion by the District for irrigation use. The construction of the irrigation works for this division is essential to secure repayment of the cost of the Storage division of the Yakima project as now constructed.

The Supreme Court of the United States in the Parker Dam decision (*United States v. State of Arizona*, 295 U. S., 174) indicated that Section 4 of the Act of June 25, 1910, 36 Stat. 835, is applicable to irrigation projects constructed under the National Industrial Recovery Act, and this report upon the Roza division of the Yakima project is made to you under said statute of 1910

and under Subsection B of Section 4 of the Act of December 5, 1924, 43 Stat., 701.

Section 4 of the Act of June 25, 1910, provides in effect, that after the date of that act no irrigation project to be constructed under the Act of June 17, 1902, 32 Stat., 388, and acts amendatory thereof or supplementary thereto shall be undertaken unless and until the project shall have been recommended by the Secretary of the Interior and approved by the direct order of the President.

Subsection B, Section 4, Act of December 5, 1924, 43 Stat., 701, provides as follows:

That no new project or new division of a project shall be approved for construction or estimates submitted therefor by the Secretary until information in detail shall be secured by him concerning the water supply, the engineering features, the cost of construction, land prices and the probable cost of development, and he shall have made a finding in writing that it is feasible, that it is adaptable for actual settlement and farm homes, and that it will probably return the cost thereof to the United States.

As heretofore stated the Roza division is approximately 100 miles long, and it has been determined that the most economical and satisfactory development will be had by constructing the irrigation system in stages, beginning at the point of diversion on the Yakima River. In accordance with this plan of development, under date of September 18, 1935, an allotment of \$5,000,000 was approved for the construction of the first unit of this division. On September 26 this allotment was reduced by \$1,000,000, leaving \$4,000,000 available for the construction of the division.

The good record of the Yakima project during the past 25 years, both from an agricultural and a repayment standpoint, justified the belief that the economic benefits to be derived from the ultimate development of the Roza division, as one of the best divisions of the Yakima project, will lead to its completion with appropriations from the Reclamation Fund, in the event further allotments of funds are not made under Title II, of the National Industrial Recovery Act approved June 16, 1933, 48 Stat., 195, or under Public Resolution No. 11—74th Congress, approved April 8, 1935, known as the Emergency Relief Appropriation Act of 1935.

The contract for repayment of cost of construction will contain provisions aimed at safeguarding the interest of settlers against the purchase of the lands of the division at inflated prices.

Surveys have been made, and the land has been classified, and I find that the division is feasible; that the land watered thereby is well adaptable for actual settlement and farm homes; that the land owners benefited by the division will be able from the agricultural produce of the lands irrigated to return the cost of the development and that therefore the construction cost of the division will probably be repaid to the United States.

Construction of the proposed irrigation works will furnish employment to large numbers now unemployed and further the purpose and intent of the Act of Congress of June 16, 1933.

I recommend that the division be approved and that the neces-

sary authority be issued to the Department to make contracts for construction of the division and for repayment of the cost thereof by the Yakima-Benton Irrigation District embracing the lands benefited.

Sincerely yours,

(Signed) HAROLD L. ICKES,
Secretary of the Interior.

Approved November 6, 1935.

(Signed) FRANKLIN D. ROOSEVELT,
President.

KENNEWICK DIVISION

An act to authorize the construction, operation, and maintenance, under Federal reclamation laws, of the Kennewick division of the Yakima project, Washington. (Act of June 12, 1948, 62 Stat. 382, Public Law 629, 80th Cong., 2d sess.)

* * * That for the purposes of irrigating lands; of generating, transmitting, and marketing hydroelectric energy; for the preservation and propagation of fish and wildlife; and looking to the completion of the Yakima project, there is hereby authorized to be constructed, operated, and maintained, in accordance with the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto) the Kennewick division of the Yakima project, composed of the following principal units, to wit:

Prosser-Chandler power canal.

Chandler hydroelectric power and hydraulic pumping plant.

Main canal.

Kiona wasteway.

Amon siphon and hydraulic pumping plant.

Amon wasteway.

Lateral system.

Improvements for fish and wildlife.

SEC. 2. Construction costs allocated to the conservation and propagation of fish and wildlife by the Secretary of the Interior in accordance with the provisions of the Act of August 14, 1946 (Public Law 732, Seventy-ninth Congress), and operation and maintenance costs attributable to operations for the preservation and propagation of fish and wildlife shall be nonreimbursable.

SEC. 3. The Secretary of the Interior is authorized to enter into contracts for the sale of electric power and energy not required for project uses, hereinafter termed commercial power and energy, at such rates as in his judgment will produce power revenues which, together with power revenues from all other sales of power and energy, will be at least sufficient to cover (1) an appropriate share of the annual operation and maintenance cost, including reasonable provision for replacements; (2) the return,

within not exceeding sixty-six years from the date upon which each feature becomes revenue producing, of an appropriate share of the construction investment properly allocable by the Secretary to commercial power and energy together with interest on the unpaid balance at a rate of not less than $2\frac{1}{2}$ per centum per annum; (3) the return, without interest, within a period not exceeding sixty-six years, and, with respect to each irrigation block, within a period conforming so far as practicable to the period within which water users are required to repay their share of the irrigation costs of that share of the investment found by the Secretary to be properly allocable to irrigation but assigned for return from net power revenues.

SEC. 4. The Secretary of the Interior is authorized to enter into contracts for repayment of those construction costs of the development assigned to be repaid by the project water users, which, in the discretion of the Secretary, may require, among other things, that those charges be distributed between the presently irrigated lands and the new lands and among farm units in a manner that takes into account the productivity of the land and in the case of new lands the estimated cost of preparing the land for irrigation, all in the manner and to the extent that the Secretary shall find to be proper: *Provided*, That these charges shall be such as will provide for the payment of (1) an appropriate share of the annual operation and maintenance cost, including reasonable provisions for replacements, and (2) repayment within a period not exceeding sixty-six years without interest of an appropriate share of that part of the construction cost which can properly be allocated to irrigation and probably be repaid by the water users.

SEC. 5. The power and energy revenues to be applied toward the fulfillment of the obligation to return that share of the investment found by the Secretary to be properly allocable to irrigation but assigned for return from net power and energy revenues may include one-fifth of the revenues derived from the interest component of power rates in addition to any and all sums otherwise assigned for such purposes from power revenues.

SEC. 6. The Secretary of the Interior is hereby authorized to construct extra capacity in the main canal for the future irrigation of approximately seven thousand acres of land, in addition to the presently proposed development, and to recognize the cost of providing such extra capacity as a deferred obligation to be paid at such time as the additional area may be brought into the project.

SEC. 7. There are hereby authorized to be appropriated, out of any moneys in the Treasury not otherwise appropriated, such sums as may be required for the purposes of this Act.

YUMA PROJECT

ARIZONA-CALIFORNIA

The Yuma project was found feasible by the Secretary on May 10, 1904, under the Reclamation Act of 1902 (32 Stat. 388); examined and reported upon by a Board of Army Engineers and approved by the President on January 5, 1911, pursuant to the act of June 25, 1910 (36 Stat. 835).

UNITED STATES GEOLOGICAL SURVEY,
RECLAMATION SERVICE,
Yuma, Arizona, April 8, 1904.

Mr. F. H. NEWELL,
Chief Engineer, Reclamation Service, Washington, D. C.

SIR: We have examined the plans and estimates, and inspected the lands under the Yuma Project, as outlined in the report¹ of J. B. Lippincott, herewith, exhibit 1.

The project includes the construction of a diversion weir across the Colorado River, near Laguna, about 15 miles above Yuma, and the construction of a canal on each side of the river, for irrigation.

Much of the land is subject to overflow at high water, and it is consequently necessary to build levees to prevent this. Drainage channels are also necessary, and at times of high water these must be discharged by means of pumping. All these plans are contemplated in the estimates, which we have found to be essentially correct, but have modified in some details. We enclose² a copy of our modified estimates herewith, exhibit 2.

We approve the general plan submitted, but have directed some further investigations in order to consider an alternative crossing of the Gila River.

The legality of the diversion of the Colorado River is essential to the feasibility of the project. The unregulated waters of the River are sufficient for all the requirements of the Yuma Project as soon as their diversion is authorized.

¹ Excluded from this publication.

² Excluded from this publication.

THE LANDS

The lands are in general very fertile, but on the California side are all included in the Indian Reservation, and we regard these as essential to the project, and legislation providing that these lands must bear their proportion of the cost of reclamation, is necessary to the feasibility of the project.

The lands on the Arizona side are mainly in private ownership, and the estimated cost of the project is so great that it is not feasible unless practically all of this land contributes to the cost. A small portion of this land is also in holdings greater than 160 acres, and all will be benefited by the levee and drainage improvements, whether it receives irrigation water or not. For these reasons we consider it imperative, not only that the owners of these lands execute liens on their land for the return of the cost of reclamation, but also that the owners of holdings exceeding 160 acres in area, shall guarantee to dispose of their surplus holdings in tracts of 160 acres, or less, in order to make full compliance with the provisions of the reclamation act. In order to secure this end we recommend that all such surplus holdings be transferred in trust to the Water Users' Association, to be sold in small tracts before the completion of the work, to persons qualified and binding themselves to take water for irrigation, under the contract between the Secretary of the Interior and the Water Users' Association.

It is also essential that legal guarantees be obtained that the costs of rights of way for canals, levees, power and pumping plants and the rectification of the channel of the Gila and Colorado Rivers, shall be reasonable.

When the conditions above outlined have been complied with, we recommend for construction the Yuma Project under the general plans prepared, subject to such modifications as have been or may be in future made by consulting boards.

To this end we recommend that Mr. J. B. Lippincott be instructed to proceed with the preparation of detailed plans and specifications for the project, and that the Honorable the Secretary of the Interior be requested to give his general approval to the Yuma Project and that the sum of \$3,000,000 be set aside in the reclamation fund, for the construction thereof, subject to the fulfillment of the above described requirements.

Very respectfully,

(Signed) A. P. DAVIS.
H. N. SAVAGE.
W. H. SANDERS.
B. M. HALL.
GEO. Y. WISNER.
J. H. QUINTON.

NOTE—In regard to lands exceeding 160 acres in one holding, or those owned by non-residents, the requirements of this report will be met by a deed of trust to the Yuma County Water Users' Ass'n, with power to sell at public auction, upon the completion of the irrigation project, if not sooner sold by the owner, to person eligible to complete a water right under the reclamation act.

UNITED STATES GEOLOGICAL SURVEY,
Washington, D. C.
May 9, 1904.

The Honorable the SECRETARY OF THE INTERIOR.

SIR: In the act making appropriations for the current and contingent expenses of the Indian Department, Public No. 125, approved April 21, 1904, sec. 25 is stated as follows:

The Secretary of the Interior is hereby authorized to divert the waters of the Colorado River and to reclaim, utilize, and dispose of any lands in said reservations, etc.

There have already been carried on under authority of the Reclamation Act of June 17, 1902, and under instructions from you extensive surveys and examinations as to the possibility of diverting the waters of Colorado River. A preliminary report has been prepared by Mr. J. B. Lippincott, supervising engineer, and submitted to the Chief Engineer. This in turn has been referred to a board of engineers consisting of Messrs. Arthur P. Davis, H. N. Savage, W. H. Sanders, B. M. Hall, Geo. Y. Wisner, and J. H. Quinton.

In general the reports indicate that by means of construction of a dam across Colorado River and other works, it will be possible to reclaim upwards of 85,000 acres of land at a cost of less than \$40 per acre. Much of this land, outside the Indian reservations is in private ownership and the feasibility of the project will depend largely upon the owners of the land uniting in a satisfactory form of organization under the terms and condition of the Reclamation Law.

The land is extremely fertile in character, the climate is somewhat tropical, and the products have such value per acre that it is believed that the cost of \$40 per acre is not prohibitive.

There are a large number of alternatives to be considered and difficult problems to be solved, but the matter has developed from the engineering side to a point where it is possible to consider the larger features and to set aside provisionally a sufficient sum of money to carry out the work contingent upon satisfactory arrangements being made with the owners of lands and vested rights and the complete solution of other matters now pending.

RECOMMENDATIONS

In view of the present condition of knowledge of the project I respectfully recommend that the sum of \$3,000,000 be set aside of the reclamation fund, for the construction of the Yuma project subject to the satisfactory adjustment of various matters pertaining to land and water titles and to structural features.

Very respectfully,

(Signed) CHAS. D. WALCOTT.
Director.

OFFICE OF THE SECRETARY,
Washington, May 10, 1904.

THE DIRECTOR OF THE GEOLOGICAL SURVEY.

SIR: In a letter of the 9th instant to the Department you referred to the act of April 21, 1904—Public No. 125—which has authorized the Secretary of the Interior “to divert the waters of the Colorado River and to reclaim, utilize and dispose of any lands in said reservations,” etc., and have referred to the surveys which have already been carried on under the act of June 17, 1902—32 Stat. 388—and to the reports submitted by the engineers.

It appears that under the Yuma Project and by means of a dam across the Colorado River and other works, upwards of 85,000 acres of land can be reclaimed at a cost of less than \$40 per acre.

You have stated that much of this land, outside of the Indian Reservations, is in private ownership, and that the feasibility of the project will depend largely on the owners of the land uniting in a satisfactory form of organization under the terms and conditions of the reclamation law.

Your recommendation is that the sum of \$3,000,000 be set aside from the reclamation fund for the construction of the Yuma Project, subject to the satisfactory adjustment of the various matters pertaining to land and water titles and to structural features.

In compliance with your recommendation I hereby set aside the sum of \$3,000,000, or so much thereof as may be necessary, from the fund provided by the Act mentioned, for the construction of the Yuma Project, under the conditions you have set forth.

Very respectfully,

(Signed) E. A. HITCHCOCK,
Secretary.

An act to authorize the Secretary of the Interior to enter into an additional contract with the Yuma County Water Users' Association with respect to payment of construction charges on the Valley division, Yuma reclamation project, Arizona, and for other purposes. (Act of June 29, 1956, 70 Stat. 409, Public Law 633, 84th Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Interior, hereinafter in this Act referred to as the Secretary, is hereby authorized to enter into a contract with the Yuma County Water Users' Association, an Arizona corporation providing for the collection and retention by the association of all construction charge payments made subsequent to the date of such contract under water-right applications on the Valley division of the Yuma reclamation project outstanding on the date of said contract and water-right applications thereafter approved on said division and the release of the association from its guaranty to the

United States of all amounts then due or thereafter to become due on said applications in consideration of the assumption by the association of the general repayment obligation defined in section 2 hereof payable to the United States without interest in annual installments not smaller than the aggregate of the payments which, in the opinion of the Secretary, would have become due pursuant to the provisions of said water-right applications.

SEC. 2. The general repayment obligation payable under the contract authorized by section 1 of this Act shall be ascertained by the Secretary (a) by adding to \$165,605.46 any operation and maintenance costs incurred on or after January 1, 1955, which are unpaid on the date of the contract, (b) by subtracting from the sum thereof (i) any payments under water-right applications heretofore or hereafter approved by the Secretary on the Valley division which have become due and payable and which have been received beginning with January 1, 1955, and prior to the date of the contract, and (ii) net profits earned on or after January 1, 1955, and prior to June 30 preceding the date of the contract which are determined by the Secretary to be properly allocable to the Valley division, all as provided in section 3 of this Act, and (c) by adjusting the difference between (a) and (b) to reflect an appropriate share, as determined by the Secretary, of any amount by which the cost to the Government of a certain trestle to be constructed by the Southern Pacific Railway Company across the Yuma Main Canal pursuant to the contract dated April 15, 1912, between it and the United States varies from \$175,306. The Secretary is hereby authorized to transfer to the association, (a) those structures covered by agreement between the United States and the association dated April 1, 1953, and bearing contract numbered 14-06-303-490, as amended March 29, 1955, and a twenty-four-stall garage in the vicinity of said structures in consideration of the cash payment or addition to the said general repayment obligation of the net book cost of \$15,000 less the aggregate of payments made by the association to the United States prior to the date of such transfer under said agreement and under agreement between the United States and the association dated November 6, 1952, and bearing contract numbered 14-06-303-79; and (b) the buildings located at 105, 115, and 121 North Fifth Avenue, respectively, and at 460 First Street, within the exterior boundaries of the city of Yuma, Arizona, in consideration of the cash payment or addition to said general repayment obligation of the further sum of \$3,756.87: *Provided*, That such transfers shall not include title to the lands on which any such structures or buildings are located.

SEC. 3. The net profits to be deducted pursuant to section 2 hereof shall constitute the portion determined by the Secretary to be allocable to said Valley Division of such profits derived to and including the June 30 immediately preceding the date of said contract from the following: leases, permits, and other arrangements for use of project lands and other project property within the division, the sale or use of townsites within the division, the sale of small tracts within the division pursuant to the Act of March

31, 1950 (64 Stat. 39, 43 U. S. C., secs. 375b-375f), and the furnishing of water or water service to other than water-right applicants from the irrigation works of the division. The contract authorized by section 1 hereof may also provide that for each subsequent fiscal year that portion of the net profits derived from the above-mentioned sources as well as the net profits from the Siphon Drop Powerplant after reserves for replacements, and/or depreciation and/or other appropriate purposes determined by the Secretary to be allocable to the division shall be credited annually, first on account of general repayment installments under said contract to become payable for the calendar year next following such fiscal year and second on account of operation and maintenance charges to become payable by the association to the United States for such calendar year, including but not limited to advance payments by the association for operation and maintenance of Siphon Drop Powerplant and payments for any rehabilitation work undertaken by the United States on behalf of the division. There is authorized to be transferred and deposited from time to time to the credit of the operation and maintenance appropriation for the Bureau of Reclamation from project revenues deposited in the reclamation fund amounts equal to the credits so applied on account of operation and maintenance charges payable by the association to the United States. The amounts thus credited to the operation and maintenance appropriation may be expended for the same objects and in the same manner as sums advanced by the association for the operation and maintenance of works retained by the United States: *Provided*, That if the Secretary determines that the portion of such net profits allocable to the division and available for such credit during any calendar year exceeds the aggregate of the general repayment installment, if any, and the operation and maintenance charge payable by the association to the United States, he may pay the amount of such excess to the association from the reclamation fund.

YUMA AUXILIARY PROJECT

ARIZONA

The Yuma Auxiliary project was authorized by the act of January 25, 1917 (39 Stat. 868).

The act of June 13, 1949, authorized the furnishing of water to the Yuma Auxiliary project through the works of the Gila Project (63 Stat. 172).

An act to provide for an auxiliary reclamation project in connection with the Yuma project Arizona: (Act of January 25, 1917, 39 Stat. 868, Public Law 293, 64th Cong., 2d sess.)

SEC. 1. That the Secretary of the Interior is hereby authorized to set apart any lands in the State of Arizona heretofore or hereafter withdrawn under the reclamation law, in connection with the Yuma reclamation project, as an auxiliary reclamation project or unit, and sell, in tracts of such size as he may determine of not more than 160 acres to any one purchaser, the lands so set apart and believed to be susceptible of irrigation, at public sale under suitable regulations, for not less than the reasonable value per acre of the land plus the estimated cost per acre of reclamation works to be constructed for the reclamation of said lands so set apart plus the proportionate cost per acre of the works previously constructed and available therefor. That appurtenant water rights for lands in private ownership may be sold for not to exceed 160 acres to any one person at a price equal to the estimated cost per acre of the works to be constructed plus the proportionate cost per acre of the works previously constructed and available for the lands, if any there be, payment to be made under the same terms as for public land under the provisions of section 2. Final water-right certificate shall not be issued to such private land until payment has been made in full. No works shall be constructed nor water delivered through any of the works of the Yuma project for the irrigation of any such private lands unless application has been made to purchase a water right for such land under the terms and provisions of this section. The Secretary of the Interior, at or prior to the time of sale, shall fix and determine (a) the reasonable value of the land per acre; (b) the estimated cost per acre of the works to be constructed; and (c) the proportionate cost per acre of the works previously constructed and available for the lands offered for sale.

SEC. 2. That all bidders at such public sale shall be required to make a deposit of ten per centum of the amount bid for the tract proposed to be purchased, and upon notice from the Secretary of the Interior that such bid has been accepted shall be required to pay fifteen per centum additional within sixty days after such notice. In case of failure to do so the deposit shall be forfeited and the corresponding lands shall be available for further sale. In case the bids for the lands shall not aggregate a sufficient amount within six months from the time fixed for the filing of bids to meet the probable cost as announced, all deposits shall be returned. The remaining seventy-five per centum of the purchase price shall be paid in three annual installments, with interest at six per centum per annum on deferred payments until paid, running from the date of notice to pay the additional fifteen per centum, but advance payments may be received at any time. Upon full payment of the purchase price patent shall issue for the lands, and no qualification or limitation shall be required of any purchaser or patentee except that he be a citizen of the United States. Such patent shall also contain a grant of a water right appurtenant to the land: *Provided*, That any person who has made an entry which is now valid and subsisting, or who has a preference right to make entry, for any irrigable land embraced within the limits of the auxiliary project, may purchase said land at the price of \$2.50 per acre and shall be subject to the same payments for the irrigation works as is required of persons holding private lands under the provisions of section one hereof: *Provided further*, That the purchasers or owners of the land to be irrigated under said auxiliary reclamation project shall also agree to pay to the United States the total actual cost of the works of said auxiliary reclamation project in the event that the actual cost of said works shall exceed the estimated cost thereof.

SEC. 3. That the moneys received under the provisions of this act shall be paid into the Treasury of the United States and be covered into a separate fund known as the auxiliary reclamation fund of the Yuma project, Arizona.

SEC. 4. That the money in the said auxiliary reclamation fund of the Yuma project, Arizona, shall be available for the construction or completion of irrigation works for the said auxiliary project or unit (to the extent of the moneys received on account thereof in connection with the sale of the lands therein). The landowners shall pay the cost of operation and maintenance, and the charges to cover such cost as fixed by the Secretary of the Interior shall be paid each year in advance of the delivery of water. Upon the announcement by the Secretary of the Interior of the completion of the said auxiliary project or unit thereof, the operation, and maintenance of the irrigation works shall, as soon as practicable, be turned over to an organization representing a majority of the landowners, to be operated and maintained by them at their expense in accordance with a contract therefor to be made with the Secretary of the Interior.

SEC. 5. Any surplus of funds paid on account of construction remaining after completion thereof, and that any money remain-

ing in said separate fund known as the auxiliary reclamation fund of the Yuma project, Arizona, after completion of the said auxiliary project and after reimbursement of the reclamation fund for the proportionate share of works built by means of the latter fund shall be credited to the cost of operation and maintenance of the works of the said auxiliary project, and any balance thereof on hand when the said auxiliary project is taken over, as provided in section four, shall be paid to the contracting organization.

SEC. 6. That the provisions of the reclamation act of June seventeenth, nineteen hundred and two, and acts amendatory thereof and supplementary thereto, known as the reclamation law, shall be applicable to such auxiliary project, except any portions of such acts as may be in conflict with the provisions hereof.

SEC. 7. That the Secretary of the Interior is hereby authorized to perform any and all acts and to make such rules and regulations as may be necessary and proper for the purpose of carrying the provisions of this act into full force and effect.

An act to authorize the furnishing of water to the Yuma Auxiliary project, Arizona, through the works of the Gila project, Arizona, and for other purposes. (Act of June 13, 1949, 63 Stat. 172, Public Law 102, 81st Cong., 1st sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all lands heretofore withdraw under the reclamation law in connection with the Yuma project and set apart or otherwise dealt with as an auxiliary project under the provisions of the Act of January 25, 1917 (39 Stat. 868), as amended, are hereby severed from said auxiliary project, except those lands in the first Mesa unit of said auxiliary project which are north of the south line of the north half of the north half of the north half of sections 17 and 18, and north of the south line of the southwest quarter of the southwest quarter of section 9, township 10 south, range 23 west, Gila and Salt River base and meridian, which lands henceforth shall constitute the entire area of the Yuma Auxiliary project. After application of the payments as provided in section 3 hereof, no costs heretofore allocated or charges heretofore assigned to the lands hereby severed from said auxiliary project shall be repayable to the United States.

SEC. 2. For a period of five years from the date of enactment of this Act the owners of land with appurtenant water rights severed from the Yuma Auxiliary project pursuant to the first section, the titles to which are deemed satisfactory by the Secretary of the Interior (hereinafter referred to as the Secretary) may exchange the same, acre for acre, for public lands and water rights within the Yuma Auxiliary project as herein limited: *Provided*, That if any tract contains any fractional acreage, the area shall be computed to the nearest acre: *Provided further*, That such privilege of exchange shall be subject to the sale or other disposition or use

by the United States of any of such public lands prior to the time an application for the exchange thereof shall have been made.

SEC. 3. The proportionate part of all payments heretofore made under the contract dated October 23, 1918, between the United States and Imperial Irrigation District, of California, which, under the Act of June 28, 1926 (44 Stat. 776), as amended, would have been applicable as a credit to the public lands of the United States severed from the Yuma Auxiliary project pursuant to the provisions of the first section of this Act, shall be applied as of the date of enactment of this Act to offset that portion of the cost, originally allocated to such lands, of those facilities previously constructed to be used jointly for the furnishing of water to the lands of the Yuma project and the Yuma Auxiliary project.

SEC. 4. (a) The Secretary is hereby authorized to negotiate and enter into a suitable contract with an organization, as defined in section 2 (g) of the Reclamation Project Act of 1939, as amended, satisfactory in form and powers to him, representing the water users of the Yuma Auxiliary project as herein limited (hereafter referred to as the organization), for the repayment of certain costs in connection with the construction of works to enable the said project to obtain delivery of water appurtenant to the lands of its water users through the works of the Gila project; to carry such water through the works of the Gila project instead of the Yuma project when additional works for the purpose shall have been completed; and to extend and improve the existing distribution system of the Yuma Auxiliary project so as more adequately to supply the needs of the water users. The contract, among other things, shall provide for the assumption of liability by the organization for (1) the repayment of the cost of the additional works necessary to supply water to the Yuma Auxiliary project through the works of the Gila project, together with an appropriate share of the cost of works common to the Gila project and the Yuma Auxiliary project; (2) the repayment of the cost of extending and improving the Yuma Auxiliary project distribution system; (3) the payment annually in advance of estimated charges for the operation and maintenance of the works of the Yuma Auxiliary project and an appropriate share of the estimated charges for the operation and maintenance of the works common to the Yuma Auxiliary project and the Gila project. The general repayment obligation of any organization entering into such contract covering the repayment of the construction, extension, and improvement costs herein enumerated may be spread in annual installments, without the payment of interest over such reasonable period not exceeding sixty years, as the Secretary may determine: *Provided, however,* That repayment of costs allocated on a per acre basis to lands not under water-right application under the Act of January 25, 1917 (39 Stat. 868), as amended, and the joint resolution of February 21, 1925 (43 Stat. 962), on the date of the contract may be deferred until after water-right application has been made: *Provided further,* That the liability of the organization with respect to the costs allocated to such lands shall be suspended upon the cancellation of any water-right application as to any payments

for the calendar year following such cancellation, and shall remain suspended until a new water-right application shall have been made. The contract may provide for the appointment of the organization as fiscal agent of the United States for the purpose of collecting any sums of money which may become due the United States with respect to land and water rights or water-right applications under the Act of January 25, 1917, as amended, and the joint resolution of February 21, 1925, and shall provide that payments made to the organization or any of its representatives for any purpose by any land and water right or water-right applicant shall not be applied to any tax or assessment of the organization if any obligations payable to the United States under the Act of January 25, 1917, as amended, or the joint resolution of February 21, 1925, remain due and unpaid. Such contract shall further provide that any lien held by the organization on lands covered by any land and water right or water-right application shall be inferior to the rights of the United States with respect to charges upon such lands under the Act of January 25, 1917, as amended, or the joint resolution of February 21, 1925, and to the lien thereon reserved by the United States pursuant to section 5 (b) of this Act.

(b) Upon the execution of a satisfactory contract pursuant to subsection (a), subject to the availability of funds therefor, the Secretary is authorized to proceed with such construction, extensions, and improvements as may be necessary to effectuate the purpose of such contract.

SEC. 5. (a) After a contract shall have been executed pursuant to section 4, land and water rights in the Yuma Auxiliary project may be sold at private sale, pursuant to the provisions of the Act of January 25, 1917 (39 Stat. 868), as amended and the joint resolution of February 21, 1925 (43 Stat. 962), for a purchase price of not less than (1) \$32 per acre for the land and (2) a sum for the water right consisting of not less than \$160 per acre for the cost of the reclamation works previously constructed exclusively for the Yuma Auxiliary project. Such purchase price shall be in addition to any charges or assessments which may be levied by the organization to pay for the per acre construction, extension, and improvement costs allocable to such land under any contract executed pursuant to section 4 of this Act: *Provided*, That said purchase price shall not include any part of the cost of works of the Yuma project and such costs, less applicable credits, shall not be repayable to the United States: *And provided further*, That after a contract shall have been executed pursuant to section 4 and water is ready for delivery to the Yuma Auxiliary project through the works of the Gila project, the water users of the Yuma Auxiliary project shall cease to be liable for any charges for the operation and maintenance of the Yuma project, except such charges as may then be due and unpaid.

(b) To insure payment of any sums due or which may become due to the United States under land and water right or water-right applications under the Act of January 25, 1917, as amended, and the joint resolution of February 21, 1925, the United States,

as of the date of the application, shall have a lien for the entire amount of its charges which shall be prior to all other liens, mortgages, claims, or interests whatsoever. Upon default of payment of any amount so due, the United States is empowered to declare the whole of the unaccrued portion of the charges due and payable and may file suit to foreclose the lien for all accrued charges in any court of competent jurisdiction and sell said land to satisfy the obligation due the United States. This remedy, however, shall not be exclusive.

SEC. 6. All provisions of the Act of January 15, 1917 (39 Stat. 868), as amended, and the joint resolution of February 21, 1925 (43 Stat. 962), not inconsistent with the provisions of this Act shall remain in full force and effect.

SEC. 7. After a contract shall have been executed pursuant to section 4 and water is ready for delivery to the Yuma Auxiliary project through the works of the Gila project, the Secretary is hereby authorized to dismantle the existing B-lift pumping plant of the Yuma Auxiliary project and to dispose of any salable parts thereof, either by public or private sale. All moneys realized from the sale of such parts shall be paid into the reclamation fund and credit therefor shall be given to the organization representing the water users of the Yuma Auxiliary project toward the construction costs assumed by it pursuant to such contract.

SEC. 8. There are hereby authorized to be appropriated such sums as may be required for the purposes of this Act.

An act to amend the act of June 13, 1949 (63 Stat. 172), and for other purposes. (Act of February 15, 1956, 70 Stat. 16, Public Law 409, 84th Cong., 2d sess.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the boundaries of the Yuma Auxiliary project, Arizona, as limited by the Act of June 13, 1949 (63 Stat. 172), are modified so as to exclude therefrom the following lands, containing two hundred eighty-five and thirteen one-hundredths irrigable acres more or less, and located in Yuma County, Arizona:

TOWNSHIP 10 SOUTH, RANGE 23 WEST, GILA AND SALT RIVER
BASE AND MERIDIAN

Section 6: Southwest quarter northeast quarter northwest quarter, west half northwest quarter southeast quarter northwest quarter, west half east half northwest quarter southeast quarter northwest quarter, southwest quarter southeast quarter northwest quarter, southwest quarter northwest quarter, northwest quarter southwest quarter.

Section 7: Southwest quarter northeast quarter northwest quarter, northwest quarter northwest quarter, northwest quarter southeast quarter northwest quarter, north half southwest quarter northwest quarter, southwest quarter southwest quarter north-

west quarter, northwest quarter southwest quarter, north half southwest quarter southwest quarter, southwest quarter southwest quarter southwest quarter.

Section 18: North half northwest quarter northwest quarter, and in lieu thereof to include in said project those lands in the same county and State which are situate in section 33, township 9 south, range 23 west, and in sections 4 and 9, township 10 south, range 23 west, and which lie between the east boundary of the project as limited by said Act and the east boundary of the right-of-way of the project's existing B-Main Canal and containing two hundred eighty-five and five one-hundredths irrigable acres more or less.

SEC. 2. This Act shall become effective upon acceptance by the Unit B Irrigation and Drainage District of an amendment to its contract dated December 22, 1952, with the United States whereby the description of the Yuma Auxiliary project therein contained or incorporated by reference is revised to conform to the modification of the boundaries of said project as hereinbefore provided.



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